Write to the backend first and invalidate the cache

**QUESTION NO: 1**

A developer has discovered that an application responsible for processing messages in an Amazon SQS queue is routinely falling behind. The application is capable of processing multiple messages in one execution, but is only receiving one message at a time What should the developer do to increase the number of messages the application receives?

(A). Call the Change Message Visibility API for the queue and set Max Number Of Messages to a value greater than the default of 1.

(B). Call the Add Permission API to set Max Number Of Messages for the Receive Message action to a value greater than the default of 1.

(C). Call the Receive Message API to set Max Number Of Messages to a value greater than the default of 1

(D). Call the Set Queue Attributes API for the queue and set Max Number Of Messages to a value greater than the default of 1.

***Answer:*** C

https://docs.aws.amazon.com/AWSSimpleQueueService/latest/APIReference/API\_ReceiveMessage.html

**QUESTION NO: 2**

A developer is preparing a deployment package using AWS Cloud Formation. The package consists of two separate templates: one for the infrastructure and one for the application. The application has to be inside the VPC that is created from the infrastructure template How can the application stack refer to the VPC created from the infrastructure template?

(A). Use the Ref function to import the VPC into the application stack from the infrastructure

# template

(B). Use the export flag in the infrastructure template, and then use the Fn::lmportValue function in the application template

(C). Use the DependsOn attribute to specify that the application instance depends on the

VPC in the application template

(D). Use the Fn::GetAtt function to include the attribute of the VPC in the application template.

***Answer:*** A

QUESTION NO: 125

**QUESTION NO: 3**

In DynamoDB, what type of HTTP response codes indicate that a problem was found with the client request sent to the service?

(A). 5xx HTTP response code

(B). 200 HTTP response code

(C). 306 HTTP response code

(D). 4xx HTTP response code

***Answer:*** D

Explanation https://docs.aws.amazon.com/AmazonS3/latest/API/ErrorResponses.html#ErrorCodeList

**QUESTION NO: 4**

A Lambda function is packaged for deployment to multiple environments, including development, test, production, etc. Each environment has unique set of resources such as databases, etc.

How can the Lambda function use the resources for the current environment?

(A). Apply tags to the Lambda functions.

(B). Hardcore resources in the source code.

(C). Use environment variables for the Lambda functions.

(D). Use separate function for development and production.

***Answer:*** C

**QUESTION NO: 5**

An AWS Lambda function must read data from an Amazon RDS MySQL database in a VPC and also reach a public endpoint over the internet to get additional data.

Which steps must be taken to allow the function to access both the RDS resource and the public endpoint? (Select TWO.)

(A). Modify the default configuration for the Lambda function to associate it with an Amazon VPC private subnet.

(B). Modify the default network access control list to allow outbound traffic.

(C). Add a NAT Gateway to the VPC.

(D). Modify the default configuration of the Lambda function to associate it with a VPC public subnet.

(E). Add an environmental variable to the Lambda function to allow outbound internet access.

***Answer:*** A,C

Reference: https://docs.aws.amazon.com/lambda/latest/dg/vpc.html

**QUESTION NO: 6**

A developer is writing an application that will process data delivered into an Amazon S3 bucket. The data is delivered approximately 10 times a day, and the developer expects the data will be processed in less than 1 minute, on average.

How can the developer deploy and invoke the application with the lowest cost and lowest latency?

A). Deploy the application as an AWS Lambda function and invoke it with an Amazon

CloudWatch alarm triggered by an S3 object upload

(B). Deploy the application as an AWS Lambda function and invoke it with an S3 event

# notification

(C). Deploy the application as an AWS Lambda function and invoke it with an Amazon

CloudWatch scheduled event

(D). Deploy the application onto an Amazon EC2 instance and have it poll the S3 bucket for new objects.

***Answer:*** ~~A~~ B

https://docs.aws.amazon.com/lambda/latest/dg/with-s3.html

**QUESTION NO: 7**

A Developer created a dashboard for an application using Amazon API Gateway, Amazon S3, AWS Lambda, and Amazon RDS. The Developer needs an authentication mechanism allowing a user to sign in and view the dashboard. It must be accessible from mobile applications, desktops, and tablets, and must remember user preferences across platforms.

Which AWS service should the Developer use to support this authentication scenario?

(A). AWS KMS

(B). Amazon Cognito

(C). AWS Directory Service

(D). Amazon IAM

***Answer:*** B

Explanation

Congito user pool provides sign up and sign in functionality along with identity pool which provides temp credentials for using aws services.

**QUESTION NO: 8**

A developer is testing a Docker-based application that uses the AWS SDK to interact with Amazon DynamoDB In the local development environment, the application has used IAM access keys The application is now ready for deployment onto an ECS duster.

How should the application authenticate with AWS services in production?

(A). Configure an ECS task IAM role for the application to use

(B). Refactor the application to call AWS STS AssumeRole based on an instance role

(C). Configure AWS access key/secret access key environment variables with new

# credentials

(D). Configure the credentials file with a new access key/secret access key

***Answer:*** A

**QUESTION NO: 9**

A developer is troubleshooting a three-tier application, which is deployed on Amazon EC2 instances. There is a connectivity problem between the application servers and the database servers.

Which AWS services or tools should be used to identify the faulty component? (Select TWO.)

(A). AWS CloudTrail.

(B). AWS Trusted Advisor

(C). Amazon VPC Flow Logs

(D). Network access control lists

(E). AWS Config rules

***Answer:*** C,D

**QUESTION NO: 10**

AWS CodeBuild builds code for an application, creates the Docker image, pushes the image to Amazon Elastic Container Registry (Amazon ECR), and tags the image with a unique identifier.

If the Developers already have AWS CLI configured on their workstations, how can the Docker images be pulled to the workstations?

1. Run the following: docker pull REPOSITORY URI: TAG
2. Run the output of the following: aws ecr get-login and then run: docker pull REPOSITORY URI: TAG
3. Run the following: aws ecr get-login and then run: docker pull REPOSITORY URI: TAG
4. Run the output of the following: aws ecr get-download-url-for-layer and then docker pull REPOSITORY URI: TAG

***Answer:*** B

Explanation https://docs.aws.amazon.com/cli/latest/reference/ecr/get-login.html

**QUESTION NO: 11**

An application on AWS is using third-party APIs. The Developer needs to monitor API errors in the code, and wants to receive notifications if failures go above a set threshold value.

How can the Developer achieve these requirements?

(A). Publish a custom metric on Amazon CloudWatch and use Amazon SES for notification.

(B). Use an Amazon CloudWatch API-error metric and use Amazon SNS for notification.

(C). Use an Amazon CloudWatch API-error metric and use Amazon SES for notification.

(D). Publish a custom metric on Amazon CloudWatch and use Amazon SNS for notification.

***Answer:*** D

**QUESTION NO: 12**

An Amazon S3 bucket, "myawsbucket" is configured with website hosting in Tokyo region, what is the region-specific website endpoint?

(A). www.myawsbucket.ap-northeast-1.amazonaws.com

(B). myawsbucket.s3-website-ap-northeast-1.amazonawscom

(C). myawsbucket.amazonaws.com

(D). myawsbucket.tokyo.amazonaws.com

***Answer:*** B

Explanation

Depending on your Region, your Amazon S3 website endpoint follows one of these two formats. s3-website dash (-) Region http://bucket-name.s3-website-Region.amazonaws.com s3website dot (.) Region http://bucket-name.s3-website.Region.amazonaws.com https://docs.aws.amazon.com/AmazonS3/latest/dev/WebsiteEndpoints.html

**QUESTION NO: 13**

You run an ad-supported photo sharing website using S3 to serve photos to visitors of your site. At some point you find out that other sites have been linking to the photos on your site, causing loss to your business.

What is an effective method to mitigate this?

(A). Store photos on an EBS volume of the web server

(B). Remove public read access and use signed URLs with expiry dates.

(C). Use CloudFront distributions for static content.

(D). Block the IPs of the offending websites in Security Groups.

***Answer:*** B Explanation

<https://aws.amazon.com/getting-started/projects/building-fast-session-caching-with-amazonelasticache-for-redis>

**QUESTION NO: 14**

A company's fleet of Amazon EC2 instances receives data from millions of users through an

API. The servers batch the data, add an object for each user, and upload the objects to an

S3 bucket to ensure high access rates The object attributes are Customer ID, Server ID, TSServer (TimeStamp and Server ID) the size of the object, and a timestamp A developer wants to find all the objects for a given user collected during a specified time range After creating an S3 object created event, how can the developer achieve this requirement^

(A). Execute an AWS Lambda function in response to the S3 object creation events that creates an Amazon DynamoDB record for every object with the Customer ID as the partition key and the Server ID as the sort key Retrieve all the records using the Customer ID and

Server ID attributes

(B). Execute an AWS Lambda function in response to the S3 object creation events that creates an Amazon Redshift record for every object with the Customer ID as the partition key and TS-Server as the sort key Retrieve all the records using the Customer ID and TS-Server attributes

(C). Execute an AWS Lambda function in response to the S3 object creation events that creates an Amazon DynamoDB record for every object with the Customer ID as the partition key and TS-Server as the sort key Retrieve all the records using the Customer ID and TS-

Server attributes

(D). Execute an AWS Lambda function in response to the S3 object creation events that creates an Amazon Redshift record for every object with the Customer ID as the partition key and the Server ID as the sort key. Retrieve all the records using the Customer ID and Server ID attributes.

***Answer:*** C

**QUESTION NO: 15**

You are writing to a DynamoDB table and receive the following exception:"

ProvisionedThroughputExceededException". though according to your Cloudwatch metrics for the table, you are not exceeding your provisioned throughput.

What could be an explanation for this?

(A). You haven't provisioned enough DynamoDB storage instances

(B). You're exceeding your capacity on a particular Range Key

(C). You're exceeding your capacity on a particular Hash Key

(D). You're exceeding your capacity on a particular Sort Key

(E). You haven't configured DynamoDB Auto Scaling triggers

# 

# ***Answer:*** C

Explanation

<https://docs.aws.amazon.com/amazondynamodb/latest/devel>

operguide/HowItWorks.CoreCo mponents.html#How

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.Partition s.html

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/bp-partition-keydesign.html

**QUESTION NO: 16**

A company has multiple Developers located across the globe who are updating code incrementally for a development project. When Developers upload code concurrently, internet connectivity is slow, and it is taking a long time to upload code for deployment in AWS Elastic Beanstalk.

Which step will result in minimized upload and deployment time with the LEAST amount of administrative effort?

(A). Allow the Developers to upload the code to an Amazon S3 bucket, and deploy it directly to Elastic Beanstalk.

(B). Allow the Developers to upload the code to a central FTP server to deploy the application to Elastic Beanstalk.

(C). Create an AWS CodeCommit repository, allow the Developers to commit code to it, and then directly deploy the code to Elastic Beanstalk.

(D). Create a code repository on an Amazon EC2 instance so that all Developers can update the code, and deploy the application from the instance to Elastic Beanstalk.

***Answer:*** ~~B~~ C

**QUESTION NO: 17**

An application under development is required to store hundreds of video files. The data must be encrypted within the application prior to storage, with a unique key for each video file.

How should the Developer code the application?

(A). Use the KMS Encrypt API to encrypt the data. Store the encrypted data key and data.

(B). Use a cryptography library to generate an encryption key for the application. Use the encryption key to encrypt the data. Store the encrypted data.

(C). Use the KMS GenerateDataKey API to get a data key. Encrypt the data with the data key. Store the encrypted data key and data.

(D). Upload the data to an S3 bucket using server side-encryption with an AWS KMS key.

***Answer:*** C

Explanation https://docs.aws.amazon.com/kms/latest/APIReference/API\_GenerateDataKey.html

**QUESTION NO: 18**

A Developer has written a serverless application using multiple AWS services. The business logic is written as a Lambda function which has dependencies on third-party libraries. The Lambda function endpoints will be exposed using Amazon API Gateway. The Lambda function will write the information to Amazon DynamoDB.

The Developer is ready to deploy the application but must have the ability to rollback. How can this deployment be automated, based on these requirements?

(A). Deploy using Amazon Lambda API operations to create the Lambda function by providing a deployment package.

(B). Use an AWS CloudFormation template and use CloudFormation syntax to define the Lambda function resource in the template.

(C). Use syntax conforming to the Serverless Application Model in the AWS CloudFormation template to define the Lambda function resource.

(D). Create a bash script which uses AWS CLI to package and deploy the application.

***Answer:*** C

Explanation

Refer AWS documentation - SAM Gradual Code Deployment

If you use AWS SAM to create your serverless application, it comes built-in with AWS CodeDeploy to help ensure safe Lambda deployments. With just a few lines of configuration, AWS SAM does the following for you:

* Deploys new versions of your Lambda function, and automatically creates aliases that pointto the new version.
* Gradually shifts customer traffic to the new version until you re satisfied that it's working asexpected, or you roll back the update.
* Defines pre-traffic and post-traffic test functions to verify that the newly deployed code isconfigured correctly and your application operates as expected. \* Rolls back the deployment if CloudWatch alarms are triggered.

**QUESTION NO: 19**

The development team is working on an API that will be served from Amazon API gateway. The API will be served from three environments: development, test, and production. The API Gateway is configured to use 237 GB of cache in all three stages.

Which is the MOST cost-efficient deployment strategy?

(A). Create a single API Gateway with all three stages.

(B). Create three API Gateways, one for each stage in a single AWS account.

(C). Create an API Gateway in three separate AWS accounts.

(D). Enable the cache for development and test environments only when needed.

***Answer:*** D

**QUESTION NO: 20**

NA

**QUESTION NO: 21**

A game stores user game data in an Amazon DynamoDB table. Individual users should not have access to other users' game data. How can this be accomplished?

(A). Encrypt the game data with individual user keys.

(B). Restrict access to specific items based on certain primary key values.

(C). Stage data in SQS queues to inject metadata before accessing DynamoDB.

(D). Read records from DynamoDB and discard irrelevant data client-side.

***Answer:*** B

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/specifying-conditions.html

**QUESTION NO: 22**

An application is using Amazon DynamoDB as its data store, and should be able to read 100

items per second as strongly consistent reads. Each item is 5 KB in size.

To what value should the table's provisioned read throughput be set?

(A). 50 read capacity units

(B). 100 read capacity units

(C). 200 read capacity units

(D). 500 read capacity unitsc

***Answer:*** C

**QUESTION NO: 23**

A developer needs to manage AWS infrastructure as code and must be able to deploy multiple identical copies of the infrastructure, stage changes, and revert to previous versions.

Which approach addresses these requirements?

(A). Use cost allocation reports and AWS OpsWorks to deploy and manage the infrastructure.

(B). Use Amazon CloudWatch metrics and alerts along with resource tagging to deploy and manage the infrastructure.

(C). Use AWS Elastic Beanstalk and AWS CodeCommit to deploy and manage the infrastructure.

(D). Use AWS CloudFormation and AWS CodeCommit to deploy and manage the infrastructure.

***Answer:*** D

**QUESTION NO: 24**

A company has developed a new serverless application using AWS Lambda functions that will be deployed using the AWS Serverless Application Model (AWS SAM) CLI Which step should the developer complete prior to deploying the application?

(A). Compress the application to a .zip file and upload it into AWS Lambda

(B). Test the new AWS Lambda function by first tracing it in AWS X-Ray.

(C). Bundle the serverless application using a SAM package

(D). Create the application environment using the eb create my-env command.

***Answer:*** ~~B~~ C

https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/serverless-application-model.pdf

**QUESTION NO: 25**

A developer has built an application running on AWS Lambda using AWS Serverless Application Model (AWS SAM). What is the correct order of execution to successfully deploy the application?

(A). 1 Build the SAM template in Amazon EC2

2 Package the SAM template to Amazon EBS storage 3. Deploy the SAM template from Amazon EBS.

(B). 1 Build the SAM template locally 2 Package the SAM template onto Amazon S3 3. Deploy the SAM template from Amazon S3.w

(C). 1 Build the SAM template locally

2. Deploy the SAM template from Amazon S3.

3 Package the SAM template for use

(D). 1 Build the SAM template locally

1. Package the SAM template from AWS CodeCommit.
2. Deploy the SAM template to CodeCommit

***Answer:*** B

Reference: https://docs.aws.amazon.com/serverless-applicationmodel/latest/developerguide/serverlessdeploying.html

**QUESTION NO: 26**

A company is building a compute-intensive application that will run on a fleet of Amazon EC2 instances. The application uses attached Amazon EBS disks for storing data. The application will process sensitive information and all the data must be encrypted.

What should a developer do to ensure the data is encrypted on disk without impacting performance?

(A). Configure the Amazon EC2 instance fleet to use encrypted EBS volumes for storing data

(B). Add logic to write all data to an encrypted Amazon S3 bucket

(C). Add a custom encryption algorithm to the application that will encrypt and decrypt all data

(D). Create a new Amazon Machine Image (AMI) with an encrypted root volume and store the data to ephemeral disks.

***Answer:*** A

**QUESTION NO: 27**

A development team wants to immediately build and deploy an application whenever there is a change to the source code. Which approaches could be used to trigger the deployment?

(Select TWO.)

(A). Store the source code in an Amazon S3 bucket Configure AWS CodePipeline to start whenever a file in the bucket changes

(B). Store the source code in an encrypted Amazon EBS volume Configure AWS

CodePipeline to start whenever a file in the volume changes

(C). Store the source code in an AWS CodeCommit repository Configure AWS CodePipeline to start whenever a change is committed to the repository.

(D). Store the source code in an Amazon S3 bucket Configure AWS CodePipeline to start every 15 minutes

(E). Store the source code in an Amazon EC2 instance's ephemeral storage. Configure the instance to start AWS CodePipeline whenever there are changes to the source code

***Answer:*** ~~B,C~~ A,C

You can store the code either in S3 or Codecommit and configure codepipeline to start the deploy process whenever a file is changed

Reference:

https://docs.aws.amazon.com/codepipeline/latest/userguide/pipelines-about-starting.html

**QUESTION NO: 28**

A developer is building a WebSocket API using Amazon API Gateway. The payload sent to this API is JSON that includes an action key This key can have three different values create, update, and remove The developer must integrate with different routes based on the value of the action key of the incoming JSON payload.

How can the developer accomplish this task with the LEAST amount of configuration?

(A). Deploy the WebSocket API to three stages for the respective routes create, update, and remove

(B). Create a new route key and set the name as action

(C). Set the value of the route selection expression to action

(D). Set the value of the route selection expression to $request.body action

***Answer:*** D

Reference:

https://docs.aws.amazon.com/apigateway/latest/developerguide/websocket-api-develop-routes.html

**QUESTION NO: 29**

NA

**QUESTION NO: 30**

What is required to trace Lambda-based applications with AWS X-Ray?

(A). Send logs from the Lambda application to an S3 bucket trigger a Lambda function from that bucket to send data to AWS X-Ray.

(B). Trigger a Lambda function from the application logs in Amazon CloudWatch to submit tracing data to AWS X-Ray

(C). Use an IAM execution role to give the Lambda function permissions and enabled tracing.

(D). Update and add AWS X-ray daemon code to relevant parts of the Lambda function to set up the trace.

***Answer:*** ~~D~~ C

Your function needs permission to upload trace data to X-Ray. When you enable active tracing in the Lambda console, Lambda adds the required permissions to your function's execution role. Otherwise, add the AWSXRayDaemonWriteAccess policy to the execution role.

**Reference:**

https://docs.aws.amazon.com/lambda/latest/dg/services-xray.html

**QUESTION NO: 31**

A developer wants to ensure the Amazon EC2 instances in AWS Elastic Beanstalk execute a certain set of commands before the application is ready to use Which Elastic Beanstalk feature will allow the developer to accomplish this?

(A). Rolling update

(B). Immutable update

(C). User data

(D).ebextensions

***Answer:*** D

**QUESTION NO: 32**

A developer is attempting to use the Amazon S3 PutObject API operation to upload an object to an S3 bucket that has default encryption enabled. The developer receives a 400 Bad Request error.

What is the MOST likely cause of this error?

(A). The API operation cannot access the encryption key

(B). The HTTP Content-Length header is missing.

(C). The object exceeds the maximum object size that is allowed.

(D). The S3 bucket exceeds the maximum storage capacity that is allowed

***Answer:*** ~~D~~ C

Reference:

https://docs.aws.amazon.com/AmazonS3/latest/API/API\_Error.html

**QUESTION NO: 33**

A developer is working on a serverless project based in Java. Initial testing shows a cold start takes about 8 seconds on average for AWS Lambda functions.

What should the developer do to reduce the cold start time'' (Select TWO)

(A). Add the Spring Framework to the project and enable dependency injection

(B). Reduce the deployment package by including only the needed modules from the AWS SDK for Java.

(C). Increase the memory allocation setting for the Lambda function.

(D). Increase the timeout setting for the Lambda function.

(E). Change the Lambda invocation mode from synchronous to asynchronous.

***Answer:*** B, C

**QUESTION NO: 34**

A Developer is testing a Docker-based application that uses the AWS SDK to interact with Amazon DynamoDB. In the local development environment, the application has used IAM access keys. The application is now ready for deployment onto an ECS cluster.

How should the application authenticate with AWS services in production?

(A). Configure an ECS task IAM role for the application to use

(B). Refactor the application to call AWS STS AssumeRole based on an instance role

(C). Configure AWS access key/secret access key environment variables with new credentials

(D). Configure the credentials file with a new access key/secret access key

***Answer:*** A

Explanation

https://docs.aws.amazon.com/AmazonECS/latest/developerguide/task\_IAM\_role.html#:~:targ etText=Amazon%

**QUESTION NO: 35**

A Developer is creating a template that uses AWS CloudFormation to deploy an application. This application is serverless and uses Amazon API Gateway, Amazon DynamoDB, and AWS Lambda.

Which tool should the Developer use to define simplified syntax for expressing serverless resources?

(A). CloudFormation serverless intrinsic functions

(B). AWS serverless express

(C). An AWS serverless application model

(D). A CloudFormation serverless plugin

***Answer:*** ~~A~~ C

"The AWS Serverless Application Model(SAM) is an open-source framework for building serverless applications. It provides shorthand syntax to express functions, APIs, databases, and event source mappings. With just a few lines per resource, you can define the application you want and model it using YAML."

Reference:

https://docs.aws.amazon.com/lambda/latest/dg/lambda-application-fundamentals.html

**QUESTION NO: 36**

An AWS Lambda function must access an external site by using a regularly rotated user name and password.

These items must be kept securely and cannot be stored in the function code.

What combination of AWS services can be used to accomplish this? (Choose two.)

(A). AWS Certificate Manager (ACM)

(B). AWS Systems Manager Parameter Store

(C). AWS Trusted Advisor

(D). AWS KMS

(E). Amazon GuardDuty

***Answer:*** B,D

Explanation https://docs.aws.amazon.com/kms/latest/developerguide/services-parameter-store.html

**QUESTION NO: 37**

In AWS, which security aspects are the customer's responsibility? Choose 4

Answers

(A). Life-cycle management of IAM credentials

(B). Decommissioning storage devices

(C). Security Group and ACL (Access Control List) settings

(D). Encryption of EBS (Elastic Block Storage) volumes

(E). Controlling physical access to compute resources

(F). Patch management on the EC2 instance's operating system

***Answer:*** A,C,D,F

Explanation

Physical and Environmental Security

AWS's data centers are state of the art, utilizing innovative architectural and engineering 233approaches.

Amazon has many years of experience in designing, constructing, and operating large-scale data centers. This experience has been applied to the AWS platform and infrastructure. AWS data centers are housed in nondescript facilities. Physical access is strictly controlled both at the perimeter and at building ingress points by professional security staff utilizing video surveillance, intrusion detection systems, and other electronic means. Authorized staff must pass two-factor authentication a minimum of two times to access data center floors. All visitors and contractors are required to present identification and are signed in and continually escorted by authorized staff.

Storage Decommissioning

* When a storage device has reached the end of its useful life, AWS procedures include adecommissioning process that is designed to prevent customer data from being exposed to unauthorized individuals.
* AWS uses the techniques detailed in DoD 5220.22-M (National Industrial Security ProgramOperating Manual) or NIST 800-88 (Guidelines for Media Sanitization) to destroy data as part of the decommissioning process.
* All decommissioned magnetic storage devices are degaussed and physically destroyed inaccordance
* with industry-standard practices.

**QUESTION NO: 38**

A developer has written an AWS Lambda function using Java as the runtime environment.

The developer wants to isolate a performance bottleneck in the code.

Which steps should be taken to reveal the bottleneck?

(A). Use the Amazon CloudWatch API to write timestamps to a custom CloudWatch metric

Use the CloudWatch console to analyze the resulting data

(B). Use the AWS X-Ray API to write trace data into X-Ray from strategic places within the code Use the Amazon CloudWatch console to analyze the resulting data

(C). Use the AWS X-Ray API to write trace data into X-Ray from strategic places within the code. Use the X-Ray console to analyze the resulting data

(D). Use the Amazon CloudWatch API to write timestamps to a custom CloudWatch metric Use the AWS X-Ray console to analyze the resulting data

***Answer:*** C

**QUESTION NO: 39**

How can software determine the public and private IP addresses of the Amazon EC2 instance that it is running on?

(A). Query the appropriate Amazon CloudWatch metric.

(B). Use ipconfig or ifconfig command.

(C). Query the local instance userdata.

(D). Query the local instance metadata.

***Answer:*** D

Explanation

https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/instancedata-data-categories.html Data: local-hostname Descriptions: The private IPv4 DNS hostname of the instance. In cases where multiple network interfaces are present, this refers to the eth0 device (the device for which the device number is 0).

Data: public-ipv4 Descriptions: The public IPv4 address. If an Elastic IP address is associated with the instance, the value returned is the Elastic IP address.

**QUESTION NO: 40**

NA

**QUESTION NO: 41**

A company is running a Docker application on Amazon ECS. The application must scale based on user load in the last 15 seconds.

How should a Developer instrument the code so that the requirement can be met?

(A). Create a high-resolution custom Amazon CloudWatch metric for user activity data, then publish data every 30 seconds

(B). Create a high-resolution custom Amazon CloudWatch metric for user activity data, then publish data every 5 seconds

(C). Create a standard-resolution custom Amazon CloudWatch metric for user activity data, then publish data every 30 seconds

(D). Create a standard-resolution custom Amazon CloudWatch metric for user activity data, then publish data every 5 seconds

***Answer:*** B Explanation

https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/publishingMetrics.html# high-resolution-me

**QUESTION NO: 42**

A Developer is designing a new application that uses Amazon S3. To satisfy compliance requirements, the Developer must encrypt the **data at rest.**

How can the Developer accomplish this?

(A). Use s3:x-amz-acl as a condition in the S3 bucket policy.

(B). Use Amazon RDS with default encryption.

(C). Use aws:SecureTransport as a condition in the S3 bucket policy.

(D). Turn on S3 default encryption for the S3 bucket.

***Answer:*** D - for encryption at rest

C – if "encryption in transit"

**Reference:**

https://aws.amazon.com/premiumsupport/knowledge-center/s3-bucket-policy-for-config-rule/ key is "encryption in transit"

**QUESTION NO: 43**

A Developer wants access to make the log data of an application running on an EC2 instance available to systems administrators.

Which of the following enables monitoring of this metric in Amazon CloudWatch?

(A). Retrieve the log data from CloudWatch using the GetMetricData API call

(B). Retrieve the log data from AWS CloudTrail using the LookupEvents API call.

(C). Launch a new EC2 instance, configure Amazon CloudWatch Events, and then install the application.

(D). Install the Amazon CloudWatch Logs agent on the EC2 instance that the application is running on.

***Answer:*** D

**QUESTION NO: 44**

An application writes items to an Amazon DynamoDB table. As the application scales to thousands of instances, calls to the DynamoDB API generate occasional ThrottlingException errors. The application is coded in a language incompatible with the AWS SDK.

How should the error be handled?

(A). Add exponential backoff to the application logic

(B). Use Amazon SQS as an API message bus

(C). Pass API calls through Amazon API Gateway

(D). Send the items to DynamoDB through Amazon Kinesis Data Firehose

***Answer:*** A Explanation

https://aws.amazon.com/premiumsupport/knowledge-center/throttled-ddb/

SDKs automatically add exponential backoff. If not using the AWS SDKs, add your own backoff logic to the application code. https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Programming.Errors. html#Programming.

**QUESTION NO: 45**

A company is developing a web application that allows its employees to upload a profile picture to a private Amazon S3 bucket There is no size limit for the profile pictures, which should be displayed every time an employee logs in. For security reasons, the pictures cannot be publicly accessible.

What is a viable long-term solution for this scenario''

(A). Generate a presigned URL when a picture is uploaded Save the URL in an Amazon

DynamoDB table Return the URL to the browser when the employee logs in

(B). Save the picture's S3 key in an Amazon DynamoDB table Create an Amazon S3 VPC endpoint to allow the employees to download pictures once they log in.

(C). Encode a picture using base64 Save the base64 string in an Amazon DynamoDB table

Allow the browser to retrieve the string and convert it to a picture

(D). Save the picture's S3 key in an Amazon DynamoDB table. Use a function to generate a presigned URL every time an employee logs in. Return the URL to the browser.

***Answer:*** ~~B~~ D

Reference: <https://aws.amazon.com/premiumsupport/knowledge-center/s3-private-connectionnoauthentication/>

**QUESTION NO: 46**

EC2 instances are launched from Amazon Machine images (AMIs). A given public AMI can:

(A). be used to launch EC2 Instances in any AWS region.

(B). only be used to launch EC2 instances in the same country as the AMI is stored.

(C). only be used to launch EC2 instances in the same AWS region as the AMI is stored.

(D). only be used to launch EC2 instances in the same AWS availability zone as the AMI is stored

***Answer:*** C

Explanation https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/usingsharedamis-finding.html

**QUESTION NO: 47**

A developer is creating a role to access Amazon S3 buckets To create the role, the developer uses the AWS CLI create-role command. Which policy should be added to allow the Amazon EC2 service to assume the role?

(A). Managed policy

(B). Trust policy

(C). Inline policy

(D). Service control policy (SCP)

***Answer:*** B

Explanation

A JSON policy document in which you define the principals that you trust to assume the role. A role trust policy is a required resource-based policy that is attached to a role in IAM. The principals that you can specify in the trust policy include users, roles, accounts, and services. https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_roles\_terms-and-concepts.html

**QUESTION NO: 48**

A Developer must repeatedly and consistently deploy a serverless RESTful API on AWS.

Which techniques will work? (Choose two.)

(A). Define a Swagger file. Use AWS Elastic Beanstalk to deploy the Swagger file.

(B). Define a Swagger file. Use AWS CodeDeploy to deploy the Swagger file.

(C). Deploy a SAM template with an inline Swagger definition.

(D). Define a Swagger file. Deploy a SAM template that references the Swagger file.

(E). Define an inline Swagger definition in a Lambda function. Invoke the Lambda function.

***Answer:*** C,D

Explanation

https://aws.amazon.com/about-aws/whats-new/2017/02/aws-serverless-application-modelaws-sam-supports-inli

<https://aws.amazon.com/about-aws/whats-new/2017/02/aws-serverless-application-modelaws-sam-supports-inli>

**QUESTION NO: 49**

A developer is writing a web application that must share secure documents with end users The documents are stored in a private Amazon S3 bucket The application must allow only authenticated users to download specific documents when requested, and only for a duration of 15 minutes How can the developer meet these requirements?

(A). Copy the documents to a separate S3 bucket that has a lifecycle policy for deletion after

15 minutes

(B). Create a presigned S3 URL using the AWS SDK with an expiration time of 15 minutes

(C). Use server-side encryption with AWS KMS managed keys (SSE-KMS) and download the documents using HTTPS

(D). Modify the S3 bucket policy to only allow specific users to download the documents Revert the change after 15 minutes.

***Answer:*** B

**QUESTION NO: 50**

NA

**QUESTION NO: 51**

A company wants to implement a continuous integration for its workloads on AWS. The company wants to trigger unit test in its pipeline for commits-on its code repository, and wants to be notified of failure events in the pipeline.

How can these requirements be met?

(A). Store the source code in AWS CodeCommit. Create a CodePipeline to automate unit testing. Use Amazon SNS to trigger notifications of failure events.

(B). Store the source code in GitHub. Create a CodePipeline to automate unit testing. Use Amazon SES to trigger notifications of failure events.

(C). Store the source code on GitHub. Create a CodePipeline to automate unit testing. Use Amazon CloudWatch to trigger notifications of failure events.

(D). Store the source code in AWS CodeCommit. Create a CodePipeline to automate unit testing. Use Amazon CloudWatch to trigger notification of failure events.

***Answer:*** ~~D~~ A

**QUESTION NO: 52**

A startup s photo-sharing site is deployed in a VPC. An ELB distributes web traffic across two subnets. ELB session stickiness is configured to use the AWS-generated session cookie, with a session TTL of 5 minutes.

The webserver Auto Scaling Group is configured as: min-size=4, max-size=4.

The startups preparing for a public launch, by running load-testing software installed on a single EC2 instance running in us-west-2a. After 60 minutes of load-testing, the webserver logs show:

Which recommendations can help ensure load-testing HTTP requests are evenly distributed across the four webservers? Choose 2

Answers

(A). Launch and run the load-tester EC2 instance from us-east-1 instead.

(B). Re-configure the load-testing software to re-resolve DNS for each web request.

(C). Use a 3rd-party load-testing service which offers globally-distributed test clients.

(D). Configure ELB and Auto Scaling to distribute across us-west-2a and us-west-2c.

(E). Configure ELB session stickiness to use the app-specific session cookie.

***Answer:*** ~~C~~,B,E

**QUESTION NO: 53**

A company recently experienced some unexpected downtime. After investigating, the company determines that a developer mistakenly terminated several production Amazon EC2 instances.

What should the company do to BEST protect against accidental terminations in the future.

(A). Enable EC2 termination protection on all production instances unless approval has been given through AWS Resource Access Manager.

(B). Modify the developer group's permissions policy to deny them access to delete production instances unless approved has been given through AWS Resource Access Manager.

(C). Modify the developer group's permission policy to require multi-factor authentication (MFA) only production instances are being delete Enable EC2 termination protection on production instances.

(D). Enable EC2 termination protection on production instances. Deny the developer group's permissions policy access to terminate instance. Create a new role that developer can assume when termination is necessary.

***Answer:*** A

**QUESTION NO: 54**

A Developer is investigating an issue whereby certain requests are passing through an Amazon API Gateway endpoint /MyAPI, but the requests do not reach the AWS Lambda function backing /MyAPI. The Developer found that a second Lambda function sometimes runs at maximum concurrency allowed for the given AWS account.

How can the Developer address this issue?

(A). Manually reduce the concurrent execution limit at the account level

(B). Add another API Gateway stage for /MyAPI, and shard the requests

(C). Configure the second Lambda function's concurrency execution limit

(D). Reduce the throttling limits in the API Gateway /MyAPI endpoint

***Answer:*** C

Explanation

https://aws.amazon.com/about-aws/whats-new/2017/11/set-concurrency-limits-on-individualaws-lambda-functi You can now set a concurrency limit on individual AWS Lambda functions. The concurrency limit you set will reserve a portion of your account level concurrency limit for a given function. This feature allows you to throttle a given function if it reaches a maximum number of concurrent executions allowed, which you can choose to set.

**QUESTION NO: 55**

A Developer has been asked to make changes to the source code of an AWS Lambda function. The function is managed using an AWS CloudFormation template. The template is configured to load the source code from an Amazon S3 bucket. The Developer manually created a .ZIP file deployment package containing the changes and put the file into the correct location on Amazon S3. When the function is invoked, the code changes have not bee

n applied.

What step is required to update the function with the changes?

(A). Delete the .ZIP file on S3, and re-upload by using a different object key name.

(B). Update the CloudFormation stack with the correct values for the function code properties S3Bucket, S3Key, or S3ObjectVersion.

(C). Ensure that the function source code is base64-encoded before uploading the deployment package to S3.

(D). Modify the execution role of the Lambda function to allow S3 access permission to the deployment package .ZIP file.

***Answer:*** B

Explanation

Changes to a deployment package in Amazon S3 are not detected automatically during stack updates. To update the function code, change the object key or version in the template. <https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-propertieslambda-function-code.html>

**QUESTION NO: 56**

Company C has recently launched an online commerce site for bicycles on AWS. They have a "Product" DynamoDB table that stores details for each bicycle, such as, manufacturer, color, price, quantity and size to display in the online store. Due to customer demand, they want to include an image for each bicycle along with the existing details.

Which approach below provides the least impact to provisioned throughput on the "Product" table?

(A). Serialize the image and store it in multiple DynamoDB tables

(B). Create an "Images" DynamoDB table to store the Image with a foreign key constraint to the "Product" table

(C). Add an image data type to the "Product" table to store the images in binary format

(D). Store the images in Amazon S3 and add an S3 URL pointer to the "Product" table item for each image

***Answer:*** D

Explanation

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/bp-use-s3too.html#bp-use-s3-too-large-v For example, consider the ProductCatalog table in the Creating Tables and Loading Data for Code Examples in DynamoDB section. Items in this table store information about item price, description, book authors, and dimensions for other products. If you wanted to store an image of each product that was too large to fit in an item, you could store the images in Amazon S3 instead of in DynamoDB.

**QUESTION NO: 57**

A Developer has a stateful web server on-premises that is being migrated to AWS. The Developer must have greater elasticity in the new design.

How should the Developer re-factor the application to make it more elastic? (Choose two.)

(A). Use pessimistic concurrency on Amazon DynamoDB

(B). Use Amazon CloudFront with an Auto Scaling group

(C). Use Amazon CloudFront with an AWS Web Application Firewall

(D). Store session state data in an Amazon DynamoDB table

(E). Use an ELB with an Auto Scaling group

***Answer:*** D,E

**QUESTION NO: 58**

A company is migrating a single-server, on-premises web application to AWS. The company intends to use multiple servers behind an Elastic Load Balancer (ELB) to balance the load, and will also store session data in memory on the web server. The company does not want to lose that session data if a server fails or goes offline, and it wants to minimize user's downtime.

Where should the company move session data to MOST effectively reduce downtime and make users' session data more fault tolerant?

(A). An Amazon ElastiCache for Redis cluster

(B). A second Amazon EBS volume

(C). The web server's primary disk

(D). An Amazon EC2 instance dedicated to session data

***Answer:*** A

**QUESTION NO: 59**

A Developer is creating a serverless website with content that includes HTML files, images, videos, and JavaScript (client-side scripts).

Which combination of services should the Developer use to create the website?

(A). Amazon S3 and Amazon CloudFront

(B). Amazon EC2 and Amazon ElastiCache

(C). Amazon ECS and Redis

(D). AWS Lambda and Amazon API Gateway

***Answer:*** A Reference: https://d1.awsstatic.com/whitepapers/Building%20Static%20Websites%20on%20AWS.pdf

**QUESTION NO: 60**

NA

**QUESTION NO: 61**

A Developer has created a software package to be deployed on multiple EC2 instances using IAM roles.

What actions could be performed to verify IAM access to get records from Amazon Kinesis

Streams? (Select TWO.)

(A). Use the AWS CLI to retrieve the IAM group.

(B). Query Amazon EC2 metadata for in-line IAM policies.

(C). Request a token from AWS STS and perform a describe action.

(D). Perform a get action using the --dry-run argument.

(E). Validate the IAM role policy with the IAM policy simulator.

***Answer:*** ~~A~~,B,E

**QUESTION NO: 62**

If a message is retrieved from a queue in Amazon SQS, how long is the message inaccessible to other users by default?

(A). 0 seconds

(B). 1 hour

(C). 1 day

(D). forever

(E). 30 seconds

***Answer:*** E Explanation

https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqsvisibility-timeout.html Visibility timeout:

default value = 30 seconds, minimum = 0 seconds, maximum = 12 hours

**QUESTION NO: 63**

A developer is deploying an application in the AWS Cloud by using AWS CloudFormation. The application will connect to an existing Amazon RDS database. The hostname of the RDS database is stored in AWS Systems Manager Parameter Store as a plaintext value. The developer needs to incorporate the database hostname into the CloudFormation template to initialize the application when the stack is created How should the developer reference the parameter that contains the database hostname?

(A). Use the ssm dynamic reference

(B). Use the Ref intrinsic function

(C). Use the Fn: ImportValue intrinsic function

(D). Use the ssm-secure dynamic reference.

***Answer:*** C

**QUESTION NO: 64**

A company caches session information for a web application in an Amazon DynamoDB table. The company wants an automated way to delete old items from the table.

What is the simplest way to do this?

(A). Write a script that deletes old records; schedule the scripts as a corn job on an Amazon EC2 instance.

(B). Add an attribute with the expiration time; enable the Time to Live feature based on that attribute.

(C). Each day, create a new table to hold session data; delete the previous day's table

. (D). Add an attribute with the expiration time; name the attribute Item Expiration.

***Answer:*** B Explanation

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/time-to-live-ttl-howto.html

**QUESTION NO: 65**

A company has an application where reading objects from Amazon S3 is based on the type of user The user types are registered user and guest user The company has 25.000 users and is growing Information is pulled from an S3 bucket depending on the user type. Which approaches are recommended to provide access to both user types? (Select TWO.)

(A). Provide a different access key and secret access key in the application code for registered users and guest users to provide read access to the objects

(B). Use S3 bucket policies to restrict read access to specific IAM users

(C). Use Amazon Cognito to provide access using authenticated and unauthenticated roles

(D). Create a new IAM user for each user and grant read access.

(E). Use the AWS IAM service and let the application assume the different roles using the AWS Security Token Service (AWS STS) AssumeRole action depending on the type of user and provide read access to Amazon S3 using the assumed role

***Answer:*** ~~B~~,C,E

**QUESTION NO: 66**

Queries to an Amazon DynamoDB table are consuming a large amount of read capacity. The table has a significant number of large attributes. The application does not need all of the attribute data.

How can DynamoDB costs be minimized while maximizing application performance?

(A). Batch all the writes, and perform the write operations when no or few reads are being performed.

(B). Create a global secondary index with a minimum set of projected attributes.

(C). Implement exponential backoffs in the application.

(D). Load balance the reads to the table using an Application Load Balancer.

***Answer:*** ~~C ,~~ B

Explanation https://docs.aws.amazon.com/AWSEC2/latest/APIReference/query-api-troubleshooting.html

**QUESTION NO: 67**

A Development team wants to instrument their code to provide more detailed information to AWS X-Ray than simple outgoing and incoming requests. This will generate large amounts of data, so the Development team wants to implement indexing so they can filter the data.

What should the Development team do to achieve this?

(A). Add annotations to the segment document and the code

(B). Add metadata to the segment document and the code

(C). Configure the necessary X-Ray environment variables

(D). Install required plugins for the appropriate AWS SDK

***Answer:*** A Explanation

https://docs.aws.amazon.com/xray/latest/devguide/xray-sdk-python-segment.html https://docs.aws.amazon.com/xray/latest/devguide/xray-concepts.html#xray-conceptsannotations

**QUESTION NO: 68**

A developer is refactoring a monolithic application. The application takes a POST request and performs several operations. Some of the operations are in parallel while others run sequentially. These operations have been refactored into individual AWS Lambda functions.

The POST request will be processed by Amazon API Gateway.

How should the developer invoke the Lambda functions in the same sequence using API Gateway\*?

(A). Use Amazon SQS to invoke the Lambda functions

(B). Use an AWS Step Functions activity to run the Lambda functions

(C). Use Amazon SNS to trigger the Lambda functions

(D). Use an AWS Step Functions state machine to orchestrate the Lambda functions.

***Answer:*** ~~A~~ ,D

**QUESTION NO: 69**

A Developer is writing transactions into a DynamoDB table called "SystemUpdates" that has 5 write capacity units.

Which option has the highest read throughput?

(A). Eventually consistent reads of 5 read capacity units reading items that are 4 KB in size

(B). Strongly consistent reads of 5 read capacity units reading items that are 4 KB in size

(C). Eventually consistent reads of 15 read capacity units reading items that are 1 KB in size

(D). Strongly consistent reads of 15 read capacity units reading items that are 1 KB in size

***Answer:*** ~~B~~ , A

<https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.ReadWriteCapacityMode.html>   
“For example, suppose that you create a provisioned table with 6 read capacity units and 6 write capacity units. With these settings, your application could do the following:

• Perform strongly consistent reads of up to 24 KB per second (4 KB × 6 read capacity units).

• Perform eventually consistent reads of up to 48 KB per second (twice as much read throughput).

• Perform transactional read requests of up to 12 KB per second.

• Write up to 6 KB per second (1 KB × 6 write capacity units).

• Perform transactional write requests of up to 3 KB per second. ”

Using the above as a guide we need to write the following calculations:

a. 2 \* 5RCU \* 4KB = 4OKB/s –

b. 5RCU \* 4KB = 2OKB/s

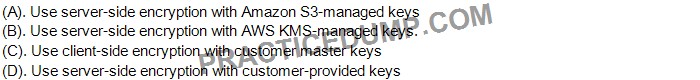
c. 2\*15RCU \* 4KB= 12OKB/s

d. 15RCU \* 4KB = 6OKB/s

Answer is C

**QUESTION NO: 70**

An application needs to encrypt data that is written to Amazon S3 where the keys are managed in an on-premises data center and the encryption is handled by S3. Which type of encryption should be used?



***Answer:*** ~~A,~~D

**QUESTION NO: 71**

A developer is working on a serverless application that needs lo 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 tabled

(A). Create an Amazon Kinesis data stream, and attach it to the DynamoDB table Create a trigger to connect the data stream to the Lambda function

(B). Create an Amazon EventBridge (Amazon CloudWatch Events) rule to invoke the Lambda function on a regular schedule Connect to the DynamoDB table from the Lambda function to detect changes

(C). Enable DynamoDB Streams on the table Create a trigger to connect the DynamoDB stream to the Lambda function

(D). Create an Amazon Kinesis Data Firehose delivery stream, and attach it to the

DynamoDB table Configure the delivery stream destination as the Lambda function

***Answer:*** C

**QUESTION NO: 72**

A company is running an application built on AWS Lambda functions. One Lambda function has performance issues when it has to download a 50MB file from the Internet in every execution. This function is called multiple times a second. What solution would give the BEST performance increase?

(A). Cache the file in the /tmp directory

(B). Increase the Lambda maximum execution time

(C). Put an Elastic Load Balancer in front of the Lambda function

(D). Cache the file in Amazon S3

***Answer:*** A Explanation https://docs.aws.amazon.com/lambda/latest/dg/runtimes-context.html

Each execution context provides 512 MB of additional disk space in the /tmp directory. The directory content remains when the execution context is frozen, providing transient cache that can be used for multiple invocations. You can add extra code to check if the cache has the data that you stored. After a Lambda function is executed, AWS Lambda maintains the execution context for some time in anticipation of another Lambda function invocation. In effect, the service freezes the execution context after a Lambda function completes, and thaws the context for reuse, if AWS Lambda chooses to reuse the context when the Lambda function is invoked again

**QUESTION NO: 73**

When writing a Lambda function, what is the benefit of instantiating AWS clients outside the scope of the handler?

(A). Legibility and stylistic convention

(B). Taking advantage of connection re-use

(C). Better error handling

(D). Creating a new instance per invocation

***Answer:*** B

Take advantage of execution environment reuse to improve the performance of your function. Initialize SDK clients and database connections outside of the function handler, and cache static assets locally in the /tmp directory. Subsequent invocations processed by the same instance of your function can reuse these resources. This saves cost by reducing function run time. https://docs.aws.amazon.com/lambda/latest/dg/best-practices.html#:~:text=Take%20advantage%20of,function%20run%20time.

**QUESTION NO: 74**

A Developer has created an S3 bucket s3://mycoolapp and has enabled server across logging that points to the folder s3://mycoolapp/logs. The Developer moved 100 KB of Cascading Style Sheets (CSS) documents to the folder s3://mycoolapp/css, and then stopped work. When the developer came back a few days later, the bucket was 50 GB.

What is the MOST likely cause of this situation?

(A). The CSS files were not compressed and S3 versioning was enabled.

(B). S3 replication was enabled on the bucket.

(C). Logging into the same bucket caused exponential log growth.

(D). An S3 lifecycle policy has moved the entire CSS file to S3 Infrequent Access.

***Answer:*** C

Explanation

Refer AWS documentation - S3 Server logs

To turn on log delivery, you provide the following logging configuration information: \* The name of the target bucket where you want Amazon S3 to save the access logs as objects. You can have logs delivered to any bucket that you own that is in the same Region as the source bucket, including the source bucket itself.We recommend that you save access logs in a different bucket so that you can easily manage the logs. If you choose to save access logs in the source bucket, we recommend that you specify a prefix for all log object keys so that the object names begin with a common string and the log objects are easier to identify.When your source bucket and target bucket are the same bucket, additional logs are created for the logs that are written to the bucket. This behavior might not be ideal for your use case because it could result in a small increase in your storage billing. In addition, the extra logs about logs might make it harder to find the log that you re looking for.

**QUESTION NO: 75**

A company wants to make sure that only one user from its Admin group has the permanent right to delete an Amazon EC2 resource There should be no changes in the existing policy under the Admin group What should a developer use to meet these requirements?

(A). AWS managed policy

(B). Inline policy

(C). IAM trust relationship

(D). AWS Security Token Service (AWS STS)

***Answer:*** B

**QUESTION NO: 76**

A developer is creating a script to automate the deployment process for a serverless application. The developer wants to use an existing AWS Serverless Application Model (AWS SAM) template for the application What should the developer use for the project? (Select

TWO)

(A). Call aws cloudformation package to create the deployment package Call aws cloudformation deploy to deploy the package afterward.

(B). Call sam package to create the deployment package Call sam deploy to deploy the package afterward

(C). Callaws s3 cp to upload the AWS SAM template to Amazon S3 Call aws lambda updatefunction-code to create the application.

(D). Create a ZIP package locally and call aws serverlessrepo create-applicarion to create the application.

(E). Create a ZIP package and upload it to Amazon S3 Call aws cloudfonnation create-stack to create the application

***Answer:*** A,B

https://docs.aws.amazon.com/codedeploy/latest/userguide/tutorial-lambda-sam-package.html

**QUESTION NO: 77**

A current architecture uses many Lambda functions invoking one another as a large state machine. The coordination of this state machine is legacy custom code that breaks easily. Which AWS Service can help refactor and manage the state machine?

(A). AWS Data Pipeline

(B). AWS SNS with AWS SQS

(C). Amazon Elastic MapReduce

(D). AWS Step Functions

***Answer:*** D

Explanation https://aws.amazon.com/step-functions/

**QUESTION NO: 78**

A company is developing a report executed by AWS Step Functions Amazon CloudWatch shows errors in the Step Functions task state machine To troubleshoot each task, the state input needs to be included along with the error message in the state output.

Which coding practice can preserve both the original input and the error for the state?

(A). Use ResultPath in a Catch statement to include the error with the original input

(B). Use inputPath in a Catch statement and set the value to null.

(C). Use ErrorEquals in a Retry statement to include the error with the original input

(D). Use OutputPath in a Retry statement and set the value to $.

***Answer:*** A

Explanation

Use ResultPath in a Catch to include the error with the original input.

Reference: https://docs.aws.amazon.com/step-functions/latest/dg/input-outputresultpath.html

**QUESTION NO: 79**

A developer is creating a new application that will be accessed by users through an API created using Amazon API Gateway The users need to be authenticated by a third-party Security Assertion Markup Language (SAML) identity provider Once authenticated, users will need access to other AWS services such as Amazon S3 and Amazon DynamoDB How can these requirements be met?

(A). Use an Amazon Cognito user pool with SAML as the resource server

(B). Use Amazon Cognito Identity pools with a SAML identity provider as one of the authentication providers

(C). Use the AWS IAM service to provide the sign-up and sign-in functionality.

(D). Use Amazon CloudFront signed URLs to connect with the SAML identity provider

***Answer:*** B

**QUESTION NO: 80**

NA

**QUESTION NO: 81**

A company is providing services to many downstream consumers. Each consumer may connect to one or more services. This has resulted in a complex architecture that is difficult to manage and does not scale well. The company needs a single interface to manage these services to consumers.

Which AWS service should be used to refactor this architecture?

(A). AWS Lambda

(B). AWS X-Ray

(C). Amazon SQS

(D). Amazon API Gateway

***Answer:*** D

https://aws.amazon.com/api-gateway/

**QUESTION NO: 82**

NA

***Answer:*** C

Explanation

> https://docs.aws.amazon.com/IAM/latest/UserGuide/reference\_policies\_variables.html > Use AWS Identity and Access Management (IAM) policy variables as placeholders when you don't know the exact value of a resource or condition key when you write the policy.

**QUESTION NO: 83**

In a move toward using microservices, a company's Management team has asked all Development teams to build their services so that API requests depend only on that service's data store. One team is building a Payments service which has its own database; the service needs data that originates in the Accounts database.

Both are using Amazon DynamoDB.

What approach will result in the simplest, decoupled, and reliable method to get near-real time updates from the Accounts database?

(A). Use Amazon Glue to perform frequent ETL updates from the Accounts database to the Payments database.

(B). Use Amazon ElastiCache in Payments, with the cache updated by triggers in the Accounts database.

(C). Use Amazon Kinesis Data Firehouse to deliver all changes from the Accounts database to the Payments database.

(D). Use Amazon DynamoDB Streams to deliver all changes from the Accounts database to the Payments database.

***Answer:*** D Reference: https://aws.amazon.com/blogs/database/how-to-perform-ordered-data-replicationbetweenapplications-by-using-

**QUESTION NO: 84**

A developer is changing the configuration for a CPU-intensive AWS Lambda function that runs once an hour.

The function usually takes 45 seconds to run, but sometimes the run time is up to 1 minute.

The timeout parameter is set to 3 minutes, and all other parameters are set to default.

The developer needs to optimize the run time of this function.

Which solution will meet this requirement?

(A). Redeploy the function within the default VPC

(B). Increase the function's memory.

(C). Redeploy the function by using Lambda layers

.(D). Increase the function's reserved concurrency

***Answer:*** B

**QUESTION NO: 85**

A company is developing an application that will be accessed through the Amazon API Gateway REST API Registered users should be the only ones who can access certain resources of this API. The token being used should expire automatically and needs to be refreshed periodically.

How can a developer meet these requirements?

(A). Create an Amazon Cognito identity pool, configure the Amazon Cognito Authorizer in

API Gateway, and use the temporary credentials generated by the identity pool

(B). Create and maintain a database record for each user with a corresponding token and use an AWS Lambda authorizer m API Gateway

(C). Create an Amazon Cognito user pool, configure the Cognito Authorizer in API Gateway, and use the identity or access token

(D). Create an IAM user for each API user, attach an invoke permissions policy to the API. and use an IAM authorizer in API Gateway.

***Answer:*** C

Reference: https://aws.amazon.com/premiumsupport/knowledge-center/cognito-customscopes-api-gateway/

**QUESTION NO: 86**

A development team wants to run their container workloads on Amazon ECS Each application container needs to share data with another container to collect logs and metrics.

What should the development team do to meet these requirements?

(A). Create two pod specifications Make one to include the application container and the other to include the other container Link the two pods together

(B). Create two task definitions Make one to include the application container and the other to include the other container. Mount a shared volume between the two tasks

(C). Create one task definition Specify both containers in the definition Mount a shared volume between those two containers

(D). Create a single pod specification Include both containers in the specification Mount a persistent volume to both containers

***Answer:*** C

**QUESTION NO: 87**

How can you secure data at rest on an EBS volume?

(A). Attach the volume to an instance using EC2's SSL interface.

(B). Write the data randomly instead of sequentially.

(C). Use an encrypted file system on top of the BBS volume.

(D). Encrypt the volume using the S3 server-side encryption service.

(E). Create an IAM policy that restricts read and write access to the volume.

***Answer:*** C

**QUESTION NO: 88**

A development team is creating a new application designed to run on AWS. While the test and production environments will run on Amazon EC2 instances, developers will each run their own environment on their laptops.

Which of the following is the simplest and MOST secure way to access AWS services from the local development machines?

(A). Use an IAM role to assume a role and execute API calls using the role.

(B). Create an IAM user to be shared with the entire development team, provide the development team with the access key.

(C). Create an IAM user for each developer on the team: provide each developer with a unique access key

(D). Set up a federation through an Amazon Cognito user pool.

***Answer:*** D

**QUESTION NO: 89**

Which of the following are correct statements with policy evaluation logic in AWS Identity and Access Management? Choose 2

Answers

(A). By default, all requests are denied

(B). An explicit allow overrides an explicit deny

(C). An explicit allow overrides default deny.

(D). An explicit deny does not override an explicit allow

(E). By default, all request are allowed

***Answer:*** A,C Explanation

https://docs.aws.amazon.com/IAM/latest/UserGuide/reference\_policies\_evaluation-logic.html

https://docs.aws.amazon.com/IAM/latest/UserGuide/reference\_policies\_evaluation-logic.html By default, all requests are implicitly denied. (Alternatively, by default, the AWS account root user has full access.) An explicit allow in an identity-based or resource-based policy overrides this default. If a permissions boundary, Organizations SCP, or session policy is present, it might override the allow with an implicit deny. An explicit deny in any policy overrides any allows.

**QUESTION NO: 90**

Games-R-Us is launching a new game app for mobile devices. Users will log into the game using their existing Facebook account and the game will record player data and scoring information directly to a DynamoDB table.

What is the most secure approach for signing requests to the DynamoDB API?

(A). Create an IAM user with access credentials that are distributed with the mobile app to sign the requests

(B). Distribute the AWS root account access credentials with the mobile app to sign the requests

(C). Request temporary security credentials using web identity federation to sign the requests

(D). Establish cross account access between the mobile app and the DynamoDB table to sign the requests

***Answer:*** C

**QUESTION NO: 91**

A deployment package uses the AWS CLI to copy files into any S3 bucket in the account, using access keys stored in environment variables. The package is running on EC2 instances, and the instances have been modified to run with an assumed IAM role and a more restrictive policy that allows access to only one bucket.

After the change, the Developer logs into the host and still has the ability to write into all of the S3 buckets in that account.

What is the MOST likely cause of this situation?

(A). An IAM inline policy is being used on the IAM role

(B). An IAM managed policy is being used on the IAM role

(C). The AWS CLI is corrupt and needs to be reinstalled

(D). The AWS credential provider looks for instance profile credentials last

***Answer:*** D Explanation

[**AWS Adds New S3 Security and Access Control Features**](https://www.mytechmint.com/aws-adds-new-s3-security-and-access-control-features/)

Credentials are checked in the following order:.

1. Command line options – –region, –output, and –profile

2. Environment variables – AWS\_ACCESS\_KEY\_ID,AWS\_SECRET\_ACCESS\_KEY, and AWS\_SESSION\_TOKEN

3. CLI credentials file –aws configure

~/.aws/credentials on Linux / Mac & C:\Users\user\.aws\credentials on Windows

4. CLI configuration file – aws configure

~/.aws/config on Linux / macOS & C:\Users\USERNAME\.aws\config on Windows

5. Container credentials – ECS tasks

6. Instance profile credentials – for EC2 Instance Profiles

**QUESTION NO: 92**

A company provides APIs as a service and commits to a service level agreement (SLA) with all its users.

To comply with each SLA, what should the company do?

(A). Enable throttling limits for each method in Amazon API Getaway.

(B). Create a usage plan for each user and request API keys to access the APIs.

(C). Enable API rate limiting in Amazon cognito for each user.

(D). Enable default throttling limits for each stage after deploying the APIs.

***Answer:*** B Explanations

https://www.atlassian.com/itsm/service-request-management/slas

A usage plan specifies who can access one or more deployed API stages and methods—and also how much and how fast they can access them. The plan uses API keys to identify API clients and meters access to the associated API stages for each key. It also lets you configure throttling limits and quota limits that are enforced on individual client API keys.

**QUESTION NO: 93**

According to best practice, how should access keys be managed in AWS? (Choose two.)

(A). Use the same access key in all applications for consistency.

(B). Delete all access keys for the account root user.

(C). Leave unused access keys in the account for tracking purposes.

(D). Embed and encrypt access keys in code for continuous deployment.

(E). Use Amazon IAM roles instead of access keys where possible.

***Answer:*** B,E

https://docs.aws.amazon.com/general/latest/gr/aws-access-keys-best-practices.html

**QUESTION NO: 94**

An AWS Lambda function accesses two Amazon DynamoDB tables. A developer wants to improve the performance of the Lambda function by identifying bottlenecks in the function.

How can the developer inspect the timing of the DynamoDB API calls?

(A). Add DynamoDB as an event source to the Lambda function. View the performance with Amazon CloudWatch metrics

(B). Place an Application Load Balancer (ALB) in front of the two DynamoDB tables. Inspect the ALB logs

(C). Limit Lambda to no more than five concurrent invocations Monitor from the Lambda console

(D). Enable AWS X-Ray tracing for the function. View the traces from the X-Ray service.

***Answer:*** D

https://docs.aws.amazon.com/lambda/latest/dg/services-xray.html

**QUESTION NO: 95**

Which of the following is an example of a good DynamoDB hash key schema for provisioned throughput efficiency?

(A). User ID, where the application has many different users.

(B). Status Code where most status codes are the same

(C). Device ID, where one is by far more popular than all the others.

(D). Game Type, where there are three possible game types

***Answer:*** A

**QUESTION NO: 96**

A developer wants to send multi-value headers to an AWS Lambda function that is registered as a target with an Application Load Balancer (ALB).

What should the developer do to achieve this?

(A). Place the Lambda function and target group in the same account

(B). Send the request body to the Lambda function with a size less than 1 MB 0

(C). Include the Base64 encoding status status code, status description, and headers in the

Lambda function

(D). Enable the multi-value headers on the ALB

***Answer:*** D

<https://docs.aws.amazon.com/elasticloadbalancing/latest/application/lambda-functions.html#enable-multi-value-headers>

**QUESTION NO: 97**

A developer is trying to get data from an Amazon DynamoDB table called demoman-table The developer configured the AWS CLI to use a specific 1AM user's credentials and executed the following command: aws dynamodb get-item table-name demoman-table --key '("id": <"N''; ''1993''}} ' The command returned errors and no rows were returned What is the MOST likely cause of these issues?

(A). The command is incorrect; it should be rewritten to use : ut-i t am with a string argument.

(B). The developer needs to log a ticket with AWS Support to enable access to the demoman-table.

(C). Amazon DynamoDB cannot be accessed from the AWS CLI and needs to be called via the REST API

(D). The 1AM user needs an associated policy with read access to demoman-table.

***Answer:*** D

**QUESTION NO: 98**

An application has hundreds of users. Each user may use multiple devices to access the application. The Developer wants to assign unique identifiers to these users regardless of the device they use.

Which of the following methods should be used to obtain unique identifiers?

(A). Create a user table in Amazon DynamoDB as key-value pairs of users and their devices.

Use these keys as unique identifiers.

(B). Use IAM-generated access key IDs for the users as the unique identifier, but do not store secret keys.

(C). Implement developer-authenticated identities by using Amazon Cognito, and get credentials for these identities.

(D). Assign IAM users and roles to the users. Use the unique IAM resource ID as the unique identifier.

***Answer:*** C

As per Community in Exam topics

**QUESTION NO: 99**

A Developer will be using the AWS CLI on a local development server to manage AWS services.

What can be done to ensure that the CLI uses the Developer's IAM permissions when making commands?

(A). Specify the Developer's IAM access key ID and secret access key as parameters for each CLI command.

(B). Run the aws configure CLI command, and provide the Developer's IAM access key ID and secret access key.

(C). Specify the Developer's IAM user name and password as parameters for each CLI command.

(D). Use the Developer's IAM role when making the CLI command.

***Answer:*** B Explanation

https://medium.com/faun/setting-up-a-production-environment-using-our-local-developmentserver-and-aws-f5e

**QUESTION NO: 100**

NA

**QUESTION NO: 101**

A Developer created a new AWS account and must create a scalable AWS Lambda function that meets the following requirements for concurrent execution:

* Average execution time of 100 seconds
* 50 requests per second

Which step must be taken prior to deployment to prevent errors?

(A). Implement dead-letter queues to capture invocation errors

(B). Add an event source from Amazon API Gateway to the Lambda function

(C). Implement error handling within the application code

(D). Contact AWS Support to increase the concurrent execution limits

***Answer:*** D

Explanation

https://aws.amazon.com/about-aws/whats-new/2017/05/aws-lambda-raises-defaultconcurrent-execution-limit/

**QUESTION NO: 102**

A Developer must trigger an AWS Lambda function based on the item lifecycle activity in an Amazon DynamoDB table.

How can the Developer create the solution?

(A). Enable a DynamoDB stream that publishes an Amazon SNS message. Trigger the Lambda function synchronously from the SNS message.

(B). Enable a DynamoDB stream that publishes an SNS message. Trigger the Lambda function asynchronously from the SNS message.

(C). Enable a DynamoDB stream, and trigger the Lambda function synchronously from the stream.

(D). Enable

a DynamoDB stream, and trigger the Lambda function asynchronously from the stream.

***Answer:*** C

Explanation <https://docs.aws.amazon.com/lambda/latest/dg/with-ddb.html>

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Streams.Lambda.htm

**QUESTION NO: 103**

A physician's office management application requires that all data in transit between an EC2 instance and an Amazon EBS volume be encrypted Which of the following techniques fulfills this requirement? (Select TWO )

(A). Create encrypted snapshots into Amazon S3

(B). Use Amazon RDS with encryption

(C). Use IAM roles to limit access to the Amazon EBS volume

(D). Enable EBS encryption

(E). Leverage OS-level encryption

Amazon EBS offer [encryption solution](https://docs.aws.amazon.com/kms/latest/developerguide/services-ebs.html#ebsencrypt) of data at rest , data in transit, and all volume backups.

***Answer:*** ~~B~~, C, D

https://aws.amazon.com/blogs/compute/must-know-best-practices-foamazon-ebs-encryption/

**QUESTION NO: 104**

NA

**QUESTION NO: 105**

A company is adding items to an Amazon DynamoDB table from an AWS Lambda function that is written in Python A developer needs to implement a solution that inserts records in the DynamoDB table and performs automatic retry when the insert fails Which solution meets these requirements with MINIMUM code changes?

(A). Configure the Python code to run the AWS CLI through shell to call the Putltem operatio n

(B). Call the Putltem operation from Python by using the DynamoDB HTTP API

(C). Queue the items in AWS Glue, which will put them into the DynamoDB table

(D). Use the AWS software development kit (SDK) for Python (boto3) to call the Putltem operation

***Answer:*** D

*Reference: https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/GettingStarted.Python.html*

**QUESTION NO: 106**

When uploading an object, what request header can be explicitly specified in a request to Amazon S3 to encrypt object data when saved on the server side?

(A). x-amz-storage-class

(B). Content-MD5

(C). x-amz-security-token

(D). x-amz-server-side-encryption

***Answer:*** D

Explanation

https://docs.aws.amazon.com/AmazonS3/latest/dev/UsingServerSideEncryption.html#APISu pportforServer-Side

**QUESTION NO: 107**

A Developer is trying to deploy a serverless application using AWS CodeDeploy. The application was updated and needs to be redeployed.

What file does the Developer need to update to push that change through CodeDeploy?

(A). dockerrun.aws.json

(B). buildspec.yml

(C). appspec.yml

(D). Ebextensions.config

After you plan your revision as described in Plan a Revision for CodeDeploy and add an AppSpec file to the revision as described in Add an Application Specification File to a Revision for CodeDeploy, you are ready to bundle the component files and push the revision to Amazon S3. "

***Answer:*** C

Explanation https://docs.aws.amazon.com/codedeploy/latest/userguide/application-revisions-push.html

**QUESTION NO: 108**

When using a large Scan operation in DynamoDB, what technique can be used to minimize the impact of a scan on a table's provisioned throughput?

(A). Set a smaller page size for the scan

(B). Use parallel scans

(C). Define a range index on the table

(D). Prewarm the table by updating all items

***Answer:*** A Explanation

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/bp-query-scan.html Because a Scan operation reads an entire page (by default, 1 MB), you can reduce the impact of the scan operation by setting a smaller page size. The Scan operation provides a Limit parameter that you can use to set the page size for your request. Each Scan or Query request that has a smaller page size uses fewer read operations and creates a "pause" between each request. For example, if each item is 4 KB and you set the page size to 40 items, then a Query request would consume only 40 strongly consistent read operations or 20 eventually consistent read operations. A larger number of smaller Scan or Query operations would allow your other critical requests to succeed without throttling.

**QUESTION NO: 109**

An AWS Elastic Beanstalk application needs to be deployed in multiple regions and requires a different Amazon Machine Image (AMI) in each region.

Which AWS CloudFormation template key can be used to specify the correct AMI for each region?

(A). Parameters

(B). Outputs

(C). Mappings

(D). Resources

***Answer:*** C

Reference: https://docs.aws.amazon.com/marketplace/latest/userguide/cloudformation.html

You can create a mapping of Regions and then use the FindInMap function along with pseudo function of AWS::Region

**QUESTION NO: 110**

A developer is building an application that runs behind an application Load Balancer (ALB). The application is configured as the origin for an Amazon CloudFront distribution. Users will log in to the application using their social media accounts. How can the developer authenticate and authorize users?

(A). Validate the user by inspecting the tokens using AWS Lambda authorizers on the ALB

(B). Configure the ALB to use Amazon Cognito as one of the authentication providers

(C). Configure Cloudfront to use Amazon Cognito as one of the authentication providers

(D). Authorize the users by calling the Amazon Cognito API in the AWS Lambda authorizer on the ALB

***Answer:*** C

**QUESTION NO: 111**

A company s website runs on an Amazon EC2 instance and uses Auto Scale the environment during peak times Website users across the world are experiencing high to sea latency due to static content on the EC2 instance, even during non-peak hours. Which combination of steps will resolve the latency issue? (Select TWO )

(A). Double the Auto Scaling group's maximum number of servers.

(B). Host the application code on AWS Lambda

(C). Scale vertically by resizing the EC2 instances

(D). Create an Amazon CloudFront distribution to cache the static content

(E). Store the application's static content in Amazon S3

***Answer:*** ~~C~~, D ,E

Reference: https://aws.amazon.com/getting-started/tutorials/deliver-content-faster/

**QUESTION NO: 112**

An application stores images in an S3 bucket. Amazon S3 event notifications are used to trigger a Lambda function that resizes the images. Processing each image takes less than a second.

How will AWS Lambda handle the additional traffic?

(A). Lambda will scale out to execute the requests concurrently.

(B). Lambda will handle the requests sequentially in the order received.

(C). Lambda will process multiple images in a single execution.

(D). Lambda will add more compute to each execution to reduce processing time.

***Answer:*** A

**QUESTION NO: 113**

Where should an Elastic Beanstalk configuration file named healthcheckur1.config be placed in the application source bundle?

(A). In the root of the application

(B). In the bin folder

(C). In healthcheckur1.config.ebextension under root

(D). In the .ebextensions folder

***Answer:*** D

https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/ebextensions.html

**QUESTION NO: 114**

Company B provides an online image recognition service and utilizes SQS to decouple system components for scalability The SQS consumers poll the imaging queue as often as possible to keep end-to-end throughput as high as possible. However, Company B is realizing that polling in tight loops is burning CPU cycles and increasing costs with empty responses.

How can Company B reduce the number of empty responses?

(A). Set the imaging queue visibility Timeout attribute to 20 seconds

(B). Set the Imaging queue ReceiveMessageWaitTimeSeconds attribute to 20 seconds

(C). Set the imaging queue MessageRetentionPeriod attribute to 20 seconds

(D). Set the DelaySeconds parameter of a message to 20 seconds

***Answer:*** B Explanation

https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqsshort-and-long-polling.h

**QUESTION NO: 115**

A company requires that AWS Lambda functions written by developers log errors so system administrators can more effectively troubleshoot issues What should the developers implement to meet this need?

(A). Publish errors to a dedicated Amazon SQS queue

(B). Create an Amazon CloudWatch Events event to trigger based on certain Lambda events.

(C). Report errors through logging statements in Lambda function code.

(D). Set up an Amazon SNS topic that sends logging statements upon failure

***Answer:*** ~~B~~ ,C

The question talks about "troubleshooting" so logging errors to the console would be more "effective" than just triggering a "CloudWatch Event"

You can insert logging statements into your code to help you validate that your code is working as expected. Lambda automatically integrates with CloudWatch Logs and pushes all logs from your code to a CloudWatch Logs group associated with a Lambda function, which is named /aws/lambda/<function name>.

https://docs.aws.amazon.com/lambda/latest/dg/java-logging.html

**QUESTION NO: 116**

You have an environment that consists of a public subnet using Amazon VPC and 3 instances that are running in this subnet. These three instances can successfully communicate with other hosts on the Internet. You launch a fourth instance in the same subnet, using the same AMI and security group configuration you used for the others, but find that this instance cannot be accessed from the Internet.

What should you do to enable internet access?

(A). Deploy a NAT instance into the public subnet.

(B). Modify the routing table for the public subnet

(C). Configure a publically routable IP Address In the host OS of the fourth instance.

(D). Assign an Elastic IP address to the fourth instance.

***Answer:*** C

**QUESTION NO: 117**

Which of the following are valid arguments for an SNS Publish request? Choose 3

Answers

(A). TopicAm

(B). Subject

(C). Destination

(D). Format

(E). Message

(F). Language

***Answer:*** A,B,E Explanation

https://docs.aws.amazon.com/sns/latest/api/API\_Publish.html

Message

MessageAttributes

MessageStructure

PhoneNumber

Subject

TargetArn

TopicArn

**QUESTION NO: 118**

What is the maximum number of S3 Buckets available per AWS account?

(A). 100 per region

(B). there is no limit

(C). 100 per account

(D). 500 per account

(E). 100 per IAM user

***Answer:*** C

Explanation https://docs.aws.amazon.com/AmazonS3/latest/dev/BucketRestrictions.html

**QUESTION NO: 119**

A company is building a stock trading application that requires sub-millisecond latency in processing trading requests. Amazon DynamoDB is used to store all the trading data that is used to process each request. After load testing the application, the development team found that due to data retrieval times, the latency requirement is not satisfied. Because of sudden high spikes in the number of requests, DynamoDB read capacity has to be significantly overprovisioned to avoid throttling.

What steps should be taken to meet latency requirements and reduce the cost of running the application?

(A). Add Global Secondary Indexes for trading data.

(B). Store trading data in Amazon S3 and use Transfer Acceleration.

(C). Add retries with exponential back-off for DynamoDB queries

(D). Use DynamoDB Accelerator to cache trading data.

***Answer:*** D

Explanation

Refer AWS documentation - DynamoDB Accelerator

Amazon DynamoDB Accelerator (DAX) is a fully managed, highly available, in-memory cache for DynamoDB that delivers up to a 10x performance improvement - from milliseconds to microseconds - even at millions of requests per second. DAX does all the heavy lifting required to add in-memory acceleration to your DynamoDB tables, without requiring developers to manage cache invalidation, data population, or cluster management. Now you can focus on building great applications for your customers without worrying about performance at scale.

**QUESTION NO: 120**

NA

**QUESTION NO: 121**

You are inserting 1000 new items every second in a DynamoDB table. Once an hour these items are analyzed and then are no longer needed. You need to minimize provisioned throughput, storage, and API calls.

Given these requirements, what is the most efficient way to manage these Items after the analysis?

(A). Retain the items in a single table

(B). Delete items individually over a 24 hour period

(C). Delete the table and create a new table per hour

(D). Create a new table per hour

***Answer:*** C

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.ReadWriteCapacityMode.html

**QUESTION NO: 122**

An application running on Amazon EC2 instances must access objects within an Amaon S3 busket that are encrypted using server-side encryption using AWS KMS encryption keys (SSE-KMS). The application must have access to the customer master key (CMK) to decrypt the objects.

Which combination of steps will grant the application access? (Select TWO.)

(A). Write an S3 bucket policy that grants the bucket access to the key.

(B). Grant access to the key in the IAM EC2 role attached to the application's EC2 instances.

(C). Write a key policy that enables IAM policies to grant access to the key.

(D). Grant access to the key in the S3 bucket's ACL

(E). Create a Systems Manager parameter that exposes the KMS key to the EC2 instances.

***Answer:*** B,C Explanation

https://aws.amazon.com/premiumsupport/knowledge-center/decrypt-kms-encrypted-objectss3/ IAM role needs access to the keys to decrypt the object and key policies must allow role access to the key. Key policies are the primary way to control access to customer master keys (CMKs) in AWS KMS. You need the permission to decrypt the AWS KMS key. When a user sends a GET request, Amazon S3 checks if the AWS Identity and Access Management (IAM) user or role that sent the request is authorized to decrypt the key associated with the object. If the IAM user or role belongs to the same AWS account as the key, then the permission to decrypt must be granted on the AWS KMS key's policy.

**QUESTION NO: 123**

A company has an AWS Lambda function that runs hourly, reads log files that are stored in Amazon S3, and forwards alerts to Amazon Simple Notification Service (Amazon SNS) topics based on content A developer wants to add a custom metric to the Lambda function to track the number of alerts of each type for each run The developer needs to log this information in Amazon CloudWatch in a metric that is named Lambda/AlertCounts How should the developer modify the Lambda function to meet this requirement with the LEAST operational overhead''

(A). Add a print statement to standard out for each alert and the number of occurrences

(B). Add a call to the PutMetricData API operation Pass an array for alerts and the number of occurrences in the Values and Counts fields with a namespace of "Lambda/AlertCounts"

(C). Add a call to the PutMetncAlarm API operation Pass an array of alerts in the metrics member with the namespace of "Lambda/AlertCounts"

(D). Add a call to the PutDashboard API operation Pass an array of alerts in the metrics member with the namespace of "Lambda/AlertCounts"

***Answer:*** C

**QUESTION NO: 124**

A company is launching a new web application in the AWS Cloud. The company's development team is using AWS Elastic Beanstalk for deployment and maintenance. According to the company's change management process, the development team must evaluate changes for a specific time period before completing the rollout.

Which deployment policy meets this requirement?

(A). Traffic splitting

(B). Rolling

(C). Rolling with additional batch

(D). Immutable

***Answer:*** D

**QUESTION NO: 125**

A developer Is working with a Docker application that needs to be quickly deployed using AWS without changing the infrastructure or configuring health checks. The application should be configured so that changes and updates can be made automatically without any downtime Which solution will meet these requirements?

(A). Use AWS Elastic Beanstalk for application deployment and select an all-at-once update policy.

(B). Use AWS Elastic Beanstalk for application deployment and select a rolling deployment policy.

(C). Deploy the Docker container on an Amazon EC2 instance in an Auto Scaling group and configure a health check on the EC2 instance

(D). Deploy the Docker container using AWS Lambda and enable Amazon CloudWatch monitoring

***Answer:*** A

**QUESTION NO: 126**

Which statements about DynamoDB are true? Choose 2

Answers

(A). DynamoDB uses a pessimistic locking model

(B). DynamoDB uses optimistic concurrency control

(C). DynamoDB uses conditional writes for consistency

(D). DynamoDB restricts item access during reads

(E). DynamoDB restricts item access during writes

***Answer:*** B,C

<https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/WorkingWithItems.html#WorkingWithItems.ConditionalUpdate>

<https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/DynamoDBMapper.OptimisticLocking.html>

**QUESTION NO: 127**

A company has a REST application comprised of an Amazon API Gateway and several AWS Lambda functions. A developer is responding to an alert that the API Gateway's HTTP response error rate has unexpectedly increased. The developer must determine must which Lambda function is malfunctioning.

Which method would help the developer make this determination while minimizing delays?

(A). Execute an Amazon Athena query against the API Gateway and Lambda execution logs.

(B). Execute an Amazon CloudWatch Logs Insights query against the API Gateway and Lambda execution logs.

(C). Download the API Gateway and Lambda execution logs from Amazon S3, and perform a line-by-line search against them.

(D). Download the API Gateway and Lambda execution logs from Amazon CloudWatch Events, and perform line-by-line search against them.

***Answer:*** ~~D~~ B

https://aws.amazon.com/premiumsupport/knowledge-center/lambda-troubleshoot-function-failures/

**QUESTION NO: 128**

A developer at a company writes an AWS CloudFormation template. The template refers to subnets that were created by a separate AWS Cloud Formation template that the company's network team wrote. When the developer attempts to launch the stack for the first time, the launch fails.

Which template coding mistakes could have caused this failure? (Select TWO.)

(A). The developer's template does not use the Ref intrinsic function to refer to the subnets

(B). The developer's template does not use the ImportValue intrinsic function to refer to the subnets

(C). The Mappings section of the developer's template does not refer to the subnets.

(D). The network team's template does not export the subnets in the Outputs section

(E). The network team's template does not export the subnets in the Mappings section

***Answer:*** B,D

**QUESTION NO: 129**

A company wants to containerize an existing three-tier web application and deploy it to Amazon ECS Fargate.

The application is using session data to keep track of user activities.

Which approach would provide the BEST user experience?

(A). Provision a Redic cluster in Amazon ElasticCache and save the session data in the cluster

(B). Create a session table in Amazon Redshift and save the session data in the database table.

(C). Enable session stickness in the existing Network Load Balancer and manage the session data in the container.

(D). Use an Amazon S3 bucket as data store and save the session data in the bucket.

***Answer:*** ~~C~~ A

**QUESTION NO: 130**

NA

**QUESTION NO: 131**

A Developer is migrating an on-premises application to AWS. The application currently takes user uploads and saves them to a local directory on the server. All uploads must be saved and made immediately available to all instances in an Auto scaling group.

Which approach will meet these requirements?

(A). Use Amazon EBS and configure the application AMI to use a snapshot of the same EBS instance on boot.

(B). Use Amazon S3 and rearchitect the application so all uploads are placed in S3.

(C). Use instance storage and share it between instances launched from the same Amazon machine image (AMI).

(D). Use Amazon EBS and file synchronization software to achieve eventual consistency among the auto scaling group.

***Answer:*** B

**QUESTION NO: 132**

An application reads data from an Amazon DynamoDB table. Several times a day, for a period of 15 seconds, the application receives multiple ProvisionedThroughputExceeded errors.

How should this exception be handled?

(A). Create a new global secondary index for the table to help with the additional requests.

(B). Retry the failed read requests with exponential backoff.

(C). Immediately retry the failed read requests.

(D). Use the DynamoDB "UpdateItem" API to increase the provisioned throughput capacity of the table.

***Answer:*** B Explanation https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Programming.Errors. html

**QUESTION NO: 133**

[A developer is building an application that reads 90 Items of data each second from an Amazon DynamoDB table. Each item Is 3 KB m size. The table is configured to use eventually consistent reads How many read capacity units should the developer provision for the table? (A) 25](#_Toc149030)

[(B) 35](#_Toc149031)

[(C) 45](#_Toc149032)

[(D)](#_Toc149033)

***[Answer:](#_Toc149033)*** [C 85](#_Toc149033)

**[QUESTION NO:](#_Toc149034)****[134](#_Toc149034)**

A video-hosting website has two types of members: those who pay a fee. and those who do not Each video upload places a message in Amazon SQS A fleet of Amazon EC2 instances polls Amazon SQS and processes each video The developer needs to ensure that the videos uploaded by the paying members are processed first How can the developer meet this requirement?’

(A). Create two SQS queues: one for paying members, and one for non-paying members Poll the paying member queue first and then poll the non-paying member queue

(B). Use SQS to set priorities on individual items within a single queue: give the paying members' videos the highest priority.

(C). Use SQS to set priorities on individual items within a single queue and use Amazon SNS to encode the videos

(D). Create two Amazon SNS topics: one for paying members and one for non-paying members Use SNS topic subscription priorities to differentiate between the two types of members.

***Answer:*** ~~B~~ A

**QUESTION NO: 135**

The Developer for a retail company must integrate a fraud detection solution into the order processing solution. The fraud detection solution takes between ten and thirty minutes to verify an order. At peak, the web site can receive one hundred orders per minute.

What is the most scalable method to add the fraud detection solution to the order processing pipeline?

(A). Add all new orders to an Amazon SQS queue. Configure a fleet of 10 EC2 instances spanning multiple AZs with the fraud detection solution installed on them to pull orders from this queue. Update the order with a pass or fails status.

(B). Add all new orders to an SQS queue. Configure an Auto Scaling group that uses the queue depth metric as its unit of scale to launch a dynamically-sized fleet of EC2 instances spanning multiple AZs with the fraud detection solution installed on them to pull orders from this queue. Update the order with a pass or fails status.

(C). Add all new orders to an Amazon Kinesis Stream. Subscribe a Lambda function to automatically read batches of records from the Kinesis Stream. The Lambda function includes the fraud detection software and will update the order with a pass or fail status. (D). Write all new orders to Amazon DynamoDB. Configure DynamoDB Streams to include all new orders. Subscribe a Lambda function to automatically read batches of records from the Kinesis Stream. The Lambda function includes the fraud detection software and will update the order with a pass or fail status.

***Answer:*** B

**QUESTION NO: 136**

Amazon S3 has the following structure: S3://BUCKET/FOLDERNAME/FILENAME.zip Which S3 best practice would optimize performance with thousands of PUT request each second to a single bucket?

(A). Prefix folder names with user id; for example, s3://BUCKET/2013-

FOLDERNAME/FILENAME.zip

(B). Prefix file names with timestamps; for example, s3://BUCKET/FOLDERNAME/2013-2605-15-00-00- FILENAME.zip

(C). Prefix file names with random hex hashes; for example, s3://BUCKET/FOLDERNAME/23a6- FILENAME.zip

(D). Prefix folder names with random hex hashes; for example, s3://BUCKET/23a6-

FOLDERNAME/ FILENAME.zip

***Answer:*** D

<https://docs.aws.amazon.com/AmazonS3/latest/dev/optimizing-performance.html>

**QUESTION NO: 137**

A global company has an application running on Amazon EC2 instances that serves image files from Amazon S3. User requests from the browser are causing high traffic, which results in degraded performance.

Which optimization solution should a Developer implement to increase application performance?

(A). Create multiple prefix in the S3 bucket to increase the request rate

(B). Create an Amazon ElastiCache cluster to cache and serve frequently accessed items.

(C). Use Amazon CloudFront to serve the content of images stored in Amazon S3.

(D). Submit a ticket to AWS support to request a rate limit increase for the S3 bucket.

***Answer:*** ~~B~~ C

**QUESTION NO: 138**

A developer is creating an application that is based on an AWS Lambda function The function uses the AWS SDK to read product price data from an Amazon S3 bucket and to write user information to an Amazon Aurora DB instance The Lambda function runs often, up to a few times each minute To meet performance requirements, the developer must minimize the run duration of the Lambda function Which actions can help the developer increase the performance? (Select TWO )

(A). Initialize SDK clients and database connections outside of the function handler

(B). Read the S3 product price data initially, and cache it locally in the /tmp directory.

(C). Use environment variables to pass operational parameters to the function.

(D). Use most-restrictive permissions when setting the 1AM policies for the Lambda 1AM role.

(E). Split the code into different Lambda functions to keep the functions smaller.

***Answer:*** A,C

**QUESTION NO: 139**

A developer has written an application that uses Amazon API Gateway and AWS Lambda. The developer needs to configure the application so that the developer can visualize the application's components and identify performance bottlenecks What should the developer do to meet these requirements?

(A). Enable AWS X-Ray tracing on the API Gateway stage

(B). Enable AWS X-Ray tracing on the API Gateway methods

(C). Enable Amazon CloudWatch Logs for API Gateway

(D). Enable Amazon CloudWatch Logs for Lambda

***Answer:*** A

**QUESTION NO: 140**

NA

**QUESTION NO: 141**

A Developer writes an AWS Lambda function and uploads the code in a .ZIP file to Amazon S3. The Developer makes changes to the code and uploads a new .ZIP file to Amazon S3.

However, Lambda executes the earlier code.

How can the Developer fix this in the LEAST disruptive way?

(A). Create another Lambda function and specify the new .ZIP file.

(B). Call the update-function-code API.

(C). Remove the earlier .ZIP file first, then add the new .ZIP file. (D). Call the create-alias API.

***Answer:*** B Explanation

<https://docs.aws.amazon.com/cli/latest/reference/lambda/update-function-code.html>

<https://docs.aws.amazon.com/cli/latest/reference/lambda/update-function-code.html>

**QUESTION NO: 142**

An e-commerce web application that shares session state on-premises is being migrated to AWS. The application must be fault tolerant, natively highly scalable, and any service interruption should not affect the user experience. What is the best option to store the session state?

(A). Store the session state in Amazon ElastiCache

(B). Store the session state in Amazon CloudFront

(C). Store the session state in Amazon S3

(D). Enable session stickiness using elastic load balancers

***Answer:*** A Explanation https://aws.amazon.com/caching/session-management/

**QUESTION NO: 143**

An advertising company has a dynamic website with heavy traffic. The company wants to migrate the website infrastructure to AWS to handle everything except website development.

Which solution BEST meets these requirements?

(A). Use AWS VM Import to migrate a web server image to AWS Launch the image on a compute-optimized Amazon EC2 instanceLaunch.

(B). Launch multiple Amazon Lighsall instance behind a load balancer. Set up the website on those instances.

(C). Deploy the website code in an AWS Elastic Beanstalk environment. Use Auto Scaling to scale the numbers of instance

(D). Use Amazon S3 to host the website. Use Amazon CloudFornt to deliver the content at scale.

***Answer:*** C

**QUESTION NO: 144**

A Developer wants to debug an application by searching and filtering log data. The application logs are stored in Amazon CloudWatch Logs. The Developer creates a new metric filter to count exceptions in the application logs. However, no results are returned from the logs.

What is the reason that no filtered results are being returned?

(A). A setup of the Amazon CloudWatch interface VPC endpoint is required for filtering the CloudWatch Logs in the VPC

(B). CloudWatch Logs only publishes metric data for events that happen after the filter is created

(C). The log group for CloudWatch Logs should be first streamed to Amazon Elasticsearch

Service before metric filtering returns the results

(D). Metric data points for logs groups can be filtered only after they are exported to an Amazon S3 bucket

***Answer:*** B Explanation

https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/MonitoringLogData.html

**QUESTION NO: 145**

When a Simple Queue Service message triggers a task that takes 5 minutes to complete, which process below will result in successful processing of the message and remove it from the queue while minimizing the chances of duplicate processing?

(A). Retrieve the message with an increased visibility timeout, process the message, delete the message from the queue

(B). Retrieve the message with an increased visibility timeout, delete the message from the queue, process the message

(C). Retrieve the message with increased DelaySeconds, process the message, delete the message from the queue

(D). Retrieve the message with increased DelaySeconds, delete the message from the queue, process the message

***Answer:*** A Explanation

https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqsvisibility-timeout.html

**QUESTION NO: 146**

A developer is storing sensitive data generated by an application in Amazon S3. The developer wants to encrypt the data at rest. A company policy requires an audit trail of when the master key was used and by whom.

Which encryption option will meet these requirements?

(A). Server-side encryption with Amazon S3 managed keys (SSE-S3)

(B). Server-side encryption with AWS KMS managed keys (SSE-KMS)

(C). Server-side encryption with customer-provided keys (SSE-C)

(D). Server-side encryption with self-managed keys

***Answer:*** B

https://docs.aws.amazon.com/AmazonS3/latest/userguide/UsingKMSEncryption.html

**QUESTION NO: 147**

A developer uses Amazon S3 buckets for static website hosting. The developer creates one S3 bucket for the code and another S3 bucket for the assets, such as image and video files. Access is denied when a user attempts to access the assets bucket from the code bucket, with the website application showing a 403 error How should the developer solve this issue?

(A). Create an IAM role and apply it to the assets bucket for the code bucket to be granted access

(B). Edit the bucket policy of the assets bucket to open access to all principals

(C). Edit the cross-origin resource sharing (CORS) configuration of the assets bucket to allow any origin to access the assets

(D). Change the code bucket to use AWS Lambda functions instead of static website hosting.

***Answer:*** C

<https://aws.amazon.com/blogs/media/deep-dive-into-cors-configs-on-aws-s3-how-to/#:~:text=%C2%A0-,What%20can%20go%20wrong%3F,-There%20are%20a>

**QUESTION NO: 148**

A developer has written code for an application and wants to share it with other developers on the team to receive feedback. The shared application code needs to be stored long-term with multiple versions and batch change tracking.

Which AWS service should the developer use?

(A). AWSCodeBuild

(B). Amazon S3

(C). AWS CodeCommit

(D). AWS Cloud9

***Answer:*** C

**QUESTION NO: 149**

Which of the following statements about SWF are true? Choose 3

Answers

(A). SWF tasks are assigned once and never duplicated

(B). SWF requires an S3 bucket for workflow storage

(C). SWF workflow executions can last up to a year

(D). SWF triggers SNS notifications on task assignment

(E). SWF uses deciders and workers to complete tasks

(F). SWF requires at least 1 EC2 instance per domain

***Answer:*** A,C,E

**QUESTION NO: 150**

NA

**QUESTION NO: 151**

A developer is automating a new application deployment with AWS Serverless Application

Model (AWS SAM) The new application has one AWS Lambda function and one Amazon S3 bucket The Lambda function must access the S3 bucket to only read objects How should the developer configure AWS SAM to grant the necessary read privilege to the S3 bucket?

(A). Reference a second Lambda authonzer function

(B). Add a custom S3 bucket policy to the Lambda function

(C). Create an Amazon Simple Queue Service (SQS) topic for only S3 object reads Reference the topic in the template.

(D). Add the S3ReadPolicy template to the Lambda function's execution role

***Answer:*** D

***Reference:*** https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/serverless-policy-templates.html

**QUESTION NO: 152**

A developer is building a backend system for the long-term storage of information from an inventory management system The information needs to be stored so that other teams can build tools to report and analyze the data How should the developer implement this solution to achieve the FASTEST running time?

(A). Create an AWS Lambda function that writes to Amazon S3 synchronously Increase the function's concurrency to match the highest expected value of concurrent scans and requests

(B). Create an AWS Lambda function that writes to Amazon S3 asynchronously Configure a dead-letter queue to collect unsuccessful invocations

(C). Create an AWS Lambda function that writes to Amazon S3 synchronously Set the inventory system to retry failed requests

(D). Create an AWS Lambda function that writes to an Amazon ElastiCache for Redis cluster

asynchronously Configure a dead-letter queue to collect unsuccessful invocations

***Answer:*** C

**QUESTION NO: 153**

An application that runs on an Amazon EC2 instance needs to access and make API calls to multiple AWS services.

What is the MOST secure way to provide access to the AWS services with MINIMAL management overhead?

(A). Use AWS KMS to store and retrieve credentials.

(B). Use EC2 instance profiles.

(C). Use AWS root user to make requests to the application.

(D). Store and retrieve credentials from AWS CodeCommit.

***Answer:*** B Explanation https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_roles\_use\_switch-role-ec2.html

**QUESTION NO: 154**

A developer is designing a web application in which new users will use their email addresses to create accounts Millions of users are expected to sign up The application will store attributes for each user.

Which AWS service or feature should the developer implement to meet these requirements?

(A). Amazon Cognito user pools

(B). AWS Mobile Hub User File Storage

(C). AWS AppSync

(D). AWS Mobile Hub Cloud Logic

***Answer:*** A

***Reference:*** https://aws.amazon.com/cognito/

**QUESTION NO: 155**

A developer is migrating a legacy monolithic application to AWS and wants to convert the application's internal processes to microservices The application's internal processes communicate through internal asynchronous messaging Occasionally, messages need to be reprocessed by multiple microservices How should the developer migrate the application's internal messaging to AWS to meet these requirements?

(A). Use Amazon Simple Queue Service (Amazon SQS) queues to communicate messages between the microservices

(B). Use Amazon API Gateway to provide REST interfaces between the microservices

(C). Use Amazon Kinesis Data Streams to communicate messages between the microservices

(D). Use Amazon API Gateway to provide WebSocket APIs between the microservices.

***Answer:*** A

**QUESTION NO: 156**

A company is launching a new web application in the AWS Cloud. The company's development team is using AWS Elastic Beanstalk for deployment and maintenance. According to the company's change management process, the development team must evaluate changes for a specific time period before completing the rollout. Which deployment policy meets this requirement?

(A). Immutable

(B). Rolling

(C). Rolling with additional batch

(D). Traffic splitting

***Answer:*** A

**QUESTION NO: 157**

A developer has created a REST API using Amazon API Gateway. The developer wants to log who and how each caller accesses the API. The developer also wants to control how long the logs are kept What should the developer do to meet these requirements?

(A). Enable API Gateway execution logging Delete old logs using API Gateway retention settings

(B). Enable API Gateway access logs Use Amazon CloudWatch retention settings to delete old logs

(C). Enable detailed Amazon CloudWatch metrics Delete old logs with a recurring AWS

Lambda function

(D). Create and use API Gateway usage plans. Delete old logs with a recurring AWS Lambda function.

***Answer:*** ~~A~~ B

***Reference:*** https://docs.aws.amazon.com/apigateway/latest/developerguide/set-up-logging.html

**QUESTION NO: 158**

Which of the following items are required to allow an application deployed on an EC2 instance to write data to a DynamoDB table?

Assume that no security Keys are allowed to be stored on the EC2 instance. Choose 2

Answers

(A). Create an IAM User that allows write access to the DynamoDB table.

(B). Add an IAM Role to a running EC2 instance.

(C). Add an IAM User to a running EC2 Instance.

(D). Launch an EC2 Instance with the IAM Role included in the launch configuration.

(E). Create an IAM Role that allows write access to the DynamoDB table.

(F). Launch an EC2 Instance with the IAM User included in the launch configuration.

***Answer:*** B,E Explanation

https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/iam-roles-for-amazonec2.html#attach-iam-role

**QUESTION NO: 159**

An ecommerce startup is preparing for an annual sales event As the traffic to the company's application increases, the development team wants to be notified when the Amazon EC2 instance's CPU utilization exceeds 80%. Which solution will meet this requirement?

(A). Create a custom Amazon CloudWatch alarm that sends a notification to an Amazon SNS topic when the CPU utilization exceeds 80%.

(B). Create a custom AWS CloudTrail alarm that sends a notification to an Amazon SNS topic when the CPU utilization exceeds 80%

(C). Create a cron job on the EC2 instance that executes the --describe-instance-information command on the host instance every 15 minutes and sends the results to an Amazon SNS topic

(D). Create an AWS Lambda function that queries the AWS CloudTrail logs for the CPU Utilization metric every 15 minutes and sends a notification to an Amazon SNS topic when the CPU utilization exceeds

80%

***Answer:*** ~~C~~ A

***Reference:*** *https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/US\_AlarmAtThresholdEC2.html*

**QUESTION NO: 160**

NA

**QUESTION NO: 161**

How does Envelope Encryption work in AWS KMS?

(A). The Customer Master Key is used to encrypidecrypt a data key The Plaintext Data Key is used to encrypt customer data.

(B). Two encryption keys are used The Customer Master Key encrypts customer data. The Data Key is used to re-encrypt the encrypted data.

(C). Two encryption keys are used The Data Key encrypts customer data The Customer

Master Key is used to re-encrypt the encrypted data

(D). The Customer Master Key is used to encrypt'decrypt a data key. The Encrypted Data Key is used to encrypt customer data.

***Answer:*** A

**QUESTION NO: 162**

A Developer must build an application that uses Amazon DynamoDB. The requirements state that items being stored in the DynamoDB table will be 7KB in size and that reads must be strongly consistent. The maximum read rate is 3 items per second, and the maximum write rate is 10 items per second.

How should the Developer size the DynamoDB table to meet these requirements?

(A). Read: 3 read capacity units

Write: 70 write capacity units

(B). Read: 6 read capacity units

Write: 70 write capacity units

(C). Read: 6 read capacity units

Write: 10 write capacity units

(D). Read: 3 read capacity units

Write: 10 write capacity units

***Answer:*** B Explanation https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Limits.html

**QUESTION NO: 163**

A Development team is working on a case management solution that allows medical claims to be processed and reviewed. Users log in to provide information related to their medical and financial situations.

As part of the application, sensitive documents such as medical records, medical imaging, bank statements, and receipts are uploaded to Amazon S3. All documents must be securely transmitted and stored. All access to the documents must be recorded for auditing.

What is the MOST secure approach?

(A). Use S3 default encryption using Advanced Encryption Standard-256 (AES-256) on the destination bucket.

(B). Use Amazon Cognito for authorization and authentication to ensure the security of the application and documents.

(C). Use AWS Lambda to encrypt and decrypt objects as they are placed into the S3 bucket.

(D). Use client-side encryption/decryption with Amazon S3 and AWS KMS.

***Answer:*** ~~A~~ D Explanation https://docs.aws.amazon.com/kms/latest/developerguide/services-s3.html

**QUESTION NO: 164**

An application overwrites an object in Amazon S3, and then immediately reads the same object. Why would the application sometimes retrieve the old version of the object?

(A). S3 overwrite PUTS are eventually consistent, so the application may read the old object.

(B). The application needs to add extra metadata to label the latest version when uploading to Amazon S3.

(C). All S3 PUTS are eventually consistent, so the application may read the old object.

(D). The application needs to explicitly specify latest version when retrieving the object.

***Answer:*** A

**QUESTION NO: 165**

A company is developing an application that will run on several Amazon EC2 instances in an Auto Scaling group and can access a database running on Amazon EC2. The application needs to store secrets required to connect to the database. The application must allow for periodic secret rotation, and there should be no changes to the application when a secret changes.

What is the SAFEST way to meet these requirements?

(A). Associate an IAM role to the EC2 instance where the application is running with permission to access the database.

(B). Use AWS Systems Manager Parameter Store with the SecureString data type to store secrets.

(C). Configure the application to store secrets in Amazon S3 object metadata.

(D). Hard code the database secrets in the application code itself.

***Answer:*** B

**QUESTION NO: 166**

A developer is developing an application that uses signed requests (Signature Version 4) to call other AWS services The developer has created a canonical request has created the string to sign, and has calculated signing information Which methods could the developer use to complete a signed request? (Select TWO )

(A). Add the signature to an HTTP header that is named Authorization

(B). Add the signature to a session cookie

(C). Add the signature to an HTTP header that is named Authentication

(D). Add the signature to a query string parameter that is named X-Amz-Signature

(E). Add the signature to an HTTP header that is named WWW-Authenticate

***Answer:*** B,D

**QUESTION NO: 167**

A developer is creating an application to process a large number of requests Requests must be processed in order, and each request should be processed only once How should Amazon SQS be deployed to achieve this?

(A). Configure First in First out (FIFO) delivery in a standard Amazon SQS queue to process requests.

(B). Use an SQS FIFO queue to process requests

(C). Use the SetOrder attribute to ensure sequential request processing

(D). Convert the standard queue to a FIFO queue by renaming the queue to use the fifo suffix.

***Answer:*** B

**QUESTION NO: 168**

A company's security policies require all database passwords to be rotated every 30 days The company uses different database platforms, including Amazon Aurora databases and proprietary NoSQL document databases, for different applications A developer needs to implement a solution for password rotation Which solution will meet these requirements?

(A). Create an AWS Lambda rotation function that has appropriate 1AM permissions Store the password in AWS Secrets Manager Configure Secrets Manager to rotate the password by using the Lambda function

(B). Encrypt the existing password with AWS Key Management Service (AWS KMS) Export the existing password Generate a random password with AWS KMS Use the AWS KMS password renewal feature to replace the existing password with the new password.

(C). Create an AWS Lambda rotation function that has appropriate 1AM permissions Store the password in AWS Systems Manager Parameter Store Configure Parameter Store to rotate the password by using the Lambda function

(D). Integrate AWS Systems Manager Parameter Store with a Key Management

Interoperability Protocol (KMIP)-compliant third-party secret manager to enable third-party database password rotation on AWS

***Answer:*** D

**QUESTION NO: 169**

A company developed a set of APIs that are being served through the Amazon API Gateway. The API calls need to be authenticated based on OpenID identity providers such as Amazon or Facebook. The APIs should allow access based on a custom authorization model. Which is the simplest and MOST secure design to use to build an authentication and authorization model for the APIs?

(A). Use Amazon Cognito user pools and a custom authorizer to authenticate and authorize users based on JSON Web Tokens.

(B). Build a Open ID token broker with Amazon and Facebook. Users will authenticate with these identify providers and pass the JSON Web Token to the API to authenticate each API call.

(C). Store user credentials in Amazon DynamoDB and have the application retrieve temporary credentials from AWS STS. Make API calls by passing user credentials to the APIs for authentication and authorization.

(D). Use Amazon RDS to store user credentials and pass them to the APIs for authentications and authorization.

***Answer:*** A

**QUESTION NO: 170**

NA

**QUESTION NO: 171**

During non-peak hours, a Developer wants to minimize the execution time of a full Amazon DynamoDB table scan without affecting normal workloads. The workloads average half of the strongly consistent read capacity units during non-peak hours.

How would the Developer optimize this scan?

(A). Use parallel scans while limiting the rate

(B). Use sequential scans

(C). Increase read capacity units during the scan operation

(D). Change consistency to eventually consistent during the scan operation

***Answer is B Need to check.***

***Explanation: https://pegacert.com/vendor/aws/dva-c01/during-nonpeak-hours-developer-wants-minimize-execution-de278***

***Answer:*** A Explanation https://aws.amazon.com/blogs/developer/rate-limited-scans-in-amazon-dynamodb/

**QUESTION NO: 172**

A company is using AWS CodeBuild to compile a website from source code stored in AWS CodeCommit. A recent change to the source code has resulted in the CodeBuild project being unable to successfully compile the website.

How should the Developer identify the cause of the failures?

(A). Modify the buildspec.yml file to include steps to send the output of build commands to Amazon CloudWatch.

(B). Use a custom Docker image that includes the AWS X-Ray agent in the AWS CodeBuild project configuration.

(C). Check the build logs of the failed phase in the last build attempt in the AWS CodeBuild project build history.

(D). Manually re-run the build process on a local machine so that the output can be visualized.

***Answer:*** ~~A~~ C

***Explanation*** https://aws.amazon.com/codebuild/faqs/?nc1=h\_ls

**QUESTION NO: 173**

A Developer is trying to make API calls using SDK. The IAM user credentials used by the application require multi-factor authentication for all API calls.

Which method the Developer use to access the multi-factor authentication protected API?

(A). GetFederationToken

(B). GetCallerIdentity

(C). GetSessionToken

(D). DecodeAutherizationMessage

***Answer:*** ~~B~~ C

Explanation : https://docs.aws.amazon.com/STS/latest/APIReference/API\_GetSessionToken.html

**QUESTION NO: 174**

A front-end web application is using Amazon Cognito user pools to handle the user authentication flow. A developer is integrating Amazon DynamoDB into the application using the AWS SDK for JavaScript How would the developer securely call the API without exposing the access or secret keys?

(A). Configure Amazon Cognito identity pools and exchange the JSON Web Token (JWT) for temporary credentials

(B). Run the web application in an Amazon EC2 instance with the instance profile configured

(C). Hardcode the credentials use Amazon S3 to host the web application, and enable server-side encryption

(D). Use Amazon Cognito user pool JSON Web Tokens (JWTs) to access the DynamoDB APIs.

***Answer:*** ~~C~~ A

Reference:  
https://docs.aws.amazon.co m/cognito/latest/developerguide/amazon-cognito-user-pools-using-tokens-verifying-a-jwt.html

**QUESTION NO: 175**

A Developer is creating a Lambda function that will generate and export a file. The function requires 100 MB of temporary storage for temporary files while executing. These files will not be needed after the function is complete.

How can the Developer MOST efficiently handle the temporary files?

(A). Store the files in EBS and delete the files at the end of the Lambda function.

(B). Copy the files to EFS and delete the files at the end of the Lambda function.

(C). Store the files in the /tmp directory and delete the files at the end of the Lambda function.

(D). Copy the files to an S3 bucket with a lifecycle policy to delete the files.

***Answer:*** C

**QUESTION NO: 176**

A company is using Amazon API Gateway to manage its public-facing API. The CISO requires that the APIs be used by test account users only. What is the MOST secure way to restrict API access to users of this particular AWS account?

(A). Client-side SSL certificates for authentication

(B). API Gateway resource policies

(C). Cross-origin resource sharing (CORS)

(D). Usage plans

***Answer:*** ~~D~~ B

https://aws.amazon.com/blogs/compute/control-access-to-your-apis-using-amazon-api-gateway-resource-policies/

**QUESTION NO: 177**

A Lambda function processes data before sending it to a downstream service Each piece of data is approximately 1 MB in size After a security audit, the function t]is now required to encrypt the data before sending it downstream Which API call is required to perform the encryption?

(A). Pass the data to the KMS ReEncrypi API for encryption

(B). Use the KMS GenerateDataKey API to get an encryption key

(C). Use the KMS GenerateDataKeyWithoutPlain.Text API to get an encryption key

(D). Pass the data to KMS as part of the Encrypt API for encryption

***Answer:*** ~~D~~ B

https://docs.aws.amazon.com/kms/latest/developerguide/programming-encryption.html

**QUESTION NO: 178**

An application running on multiple Amazon EC2 instances pulls messages ...SQS queue. A requirement for the application is that all messages must be encrypted at rest. Developers are instructed to use methods that allow for centralized .. possible support requirements whenever possible.

Which of the following solution supports these requirements?

(A). Encrypt individual messages by using client-side encryption with customer managed keys, then write to the SQS queue.

(B). Encrypt individual messages by using SQS Extended Client and the Amazon S3 encryption client.

(C). Create an SQS queue, and encrypt the queue by using server-side encryption with AWS KMS

(D). Create an SQS queue and encrypt the queue by using client-side encryption

***Answer:*** C

**QUESTION NO: 179**

How is provisioned throughput affected by the chosen consistency model when reading data from a DynamoDB table?

(A). Strongly consistent reads use the same amount of throughput as eventually consistent reads

(B). Strongly consistent reads use more throughput than eventually consistent reads.

(C). Strongly consistent reads use less throughput than eventually consistent reads

(D). Strongly consistent reads use variable throughput depending on read activity

***Answer:*** B

**QUESTION NO: 180**

NA

**QUESTION NO: 181**

NA

**QUESTION NO: 182**

A developer has created an AWS Lambda function that is written in Python The Lambda function reads data from objects in Amazon S3 and writes data to an Amazon DynamoDB table The function is successfully invoked from an S3 event notification when an object is created However, the function fails when if attempts to write to the DynamoDB table What is the MOST likely cause of this issue?

(A). The Lambda function's concurrency limit has been exceeded

(B). The DynamoDB table requires a global secondary index (GSI) to support writes.

(C). The Lambda function does not have 1AM permissions to write to DynamoDB ID.

(D). The DynamoDB table is not running in the same Availability Zone as the Lambda function.

***Answer:*** C

**QUESTION NO: 183**

A company recently migrated its web, application and NoSQL database tiers to AWS. The company is using Auto Scaling to scale the web and application tiers. More than 95 percent of the Amazon DynamoDB requests are repeated read-requests.

How can the DynamoDB NoSQL tier be scaled up to cache these repeated requests?

(A). Amazon EMR

(B). Amazon DynamoDB Accelerator

(C). Amazon SQS

(D). Amazon CloudFront

***Answer:*** B

Reference: https://aws.amazon.com/dynamodb/dax/

**QUESTION NO: 184**

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 Elasticsearch Service (Amazon ES), Logstash, and Kibana

(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

**QUESTION NO: 185**

A company is launching an ecommerce website and will host the static data in Amazon S3. The company expects approximately 1000 transactions per second (TPS) for GET and PUT requests in total. Logging must be enabled to track all requests and must be retained for auditing purposes.

What is the MOST cost-effective solution?

(A). Enable AWS CloudTrail logging for the S3 bucket-level action and create a lifecycle policy to move the data from the log bucket to Amazon S3 Glacier in 90 days

(B). Enable S3 server access logging and create a lifecycle policy to expire the data in 90 days

(C). Enable AWS CloudTrail logging for the S3 bucket-level action and create a lifecycle policy to expire the data in 90 days

(D). Enable S3 server access logging and create a lifecycle policy to move the data to

Amazon S3 Glacier in 90 days.

***Answer:*** ~~C~~ D

Reference: https://docs.aws.amazon.com/AmazonS3/latest/dev/cloudtrail-request-identification.html

**QUESTION NO: 186**

A developer is creating an event handling system. To handle messages asynchronously, the developer created a standard Amazon SQS queue Quality assurance testing reveals that some events were processed multiple times.

What is the recommended way to ensure the events are not processed more than once?

(A). Change long polling to short polling.

(B). Use a FIFO queue and configure deduplication

(C). Convert the standard SQS queue into a FIFO queue

(D). Send the messages with message timers

***Answer:*** B

https://docs.aws.amazon.com/lambda/latest/dg/with-sqs.html

<https://docs.aws.amazon.com/lambda/latest/dg/with-sqs.html>

**QUESTION NO: 187**

A Developer is creating a mobile application with a limited budget. The solution requires a scalable service that will enable customers to sign up and authenticate into the mobile application while using the organization's current SAML 2.0 identity provider. Which AWS service should be used to meet these requirements?

(A). AWS Lambda

(B). Amazon Cognito

(C). AWS IAM

(D). Amazon EC2

***Answer:*** B

**QUESTION NO: 188**

A Developer is receiving HTTP 400: ThrottlingException errors intermittently when calling the Amazon CloudWatch API. When a call fails, no data is retrieved.

What best practice should first be applied to address this issue?

(A). Contact AWS Support for a limit increase.

(B). Use the AWS CLI to get the metrics

(C). Analyze the applications and remove the API call

(D). Retry the call with exponential backoff

***Answer:*** D

Explanation https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/cloudwatch\_limits.html

**QUESTION NO: 189.**

A company wants to migrate an imaging service to Amazon EC2 while following security best practices. The images are sourced and read from a non-public Amazon S3 bucket.

What should a developer do to meet these requirements?

(A). Create an IAM user with read-only permissions for the S3 bucket Temporarily store the user credentials in the Amazon EBS volume of the EC2 instance

(B). Create an IAM user with read-only permissions for the S3 bucket. Temporarily store the user credentials in the user data of the EC2 instance.

(C). Create an EC2 service role with read-only permissions for the S3 bucket Attach the role to the EC2 instance

(D). Create an S3 service role with read-only permissions for the S3 bucket Attach the role to the EC2 instance

***Answer:*** ~~A~~ C

<https://docs.aws.amazon.com/IAM/latest/UserGuide/id_roles_use_switch-role-ec2.html>

**QUESTION NO: 190**

A developer is updating an application deployed on AWS Elastic Beanstalk The new version is incompatible with the old version To successfully deploy the update, a full cutover to the new updated version must be performed on all instances at one time, with the ability to roll back changes in case of a deployment failure in the new version How can this be performed with the LEAST amount of downtime?

(A). Use the Elastic Beanstalk All at once deployment policy to update all instances simultaneously

(B). Perform an Elastic Beanstalk Rolling with additional batch deployment

(C). Deploy the new version in a new Elastic Beanstalk environment and swap environment

URLs

(D). Perform an Elastic Beanstalk Rolling deployment

***Answer:*** C

**QUESTION NO: 191**

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 ElasticCache.

(B). Write data to Amazon Elastic Block Store.

(C). Write data to Amazon EC2 instance Block Store.

(D). Write data to the root filesystem.

***Answer:*** A

<https://docs.aws.amazon.com/aws-technical-content/latest/microservices-on-aws/microservices-on-aws.pdf?icmpid=link_from_whitepapers_page>

**QUESTION NO: 192**

A supplier is writing a new RESTful API for customers to query the status of orders. The customers requested the following API endpoint. http://www.supplierdomain.com/status/customerID

Which of the following application designs meet the requirements? (Select two.)

(A). Amazon SQS; Amazon SNS

(B). Elastic Load Balancing; Amazon EC2

(C). Amazon ElastiCache; Amazon Elacticsearch Service

(D). Amazon API Gateway; AWS Lambda

(E). Amazon S3; Amazon CloudFront

***Answer:*** ~~D,E~~ BD

**QUESTION NO: 193**

Multiple development teams are working on a project to migrate a monolithic application to a microservices-based application running on AWS Lambda The teams need a way to centrally manage code that is shared across multiple functions Which approach requires the LEAST maintenance?

(A). Each team maintains the code for the common components in their own code repository.

They build and deploy the components with their Lambda functions together.

(B). One team builds a Lambda layer to include the common components and shares the layer with the other teams

(C). Each team builds and publishes the component they want to share to an Amazon S3 bucket The Lambda functions will download the components from the bucket

(D). One team builds a Docker container for the common components and shares the container with the other teams

***Answer:*** C

**QUESTION NO: 194**

An application development team decides to use AWS X Ray to monitor application code to analyze performance and perform r cause analysis What does the team need to do to begin using X Ray? (Select TWO )

(A). Log instrumentation output into an Amazon SQS queue

(B). Use a visualization tool to view application traces

(C). Instrument application code using the AWS SDK

(D). Install the X-Ray agent on the application servers

(E). Create an Amazon DynamoDB table to store the trace logs

***Answer:*** ~~D,E~~ CD

Reference: https://docs.aws.amazon.com/xray/latest/devguide/aws-xray.html

**QUESTION NO: 195**

A company is managing a NoSQL database on-premises to host a critical component of an application, which is starting to have scaling issues. The company wants to migrate the application to Amazon DynamoDB with the following considerations:

* Optimize frequent queries
* Reduce read latencies
* Plan for frequent queries on certain key attributes of the tableWhich solution would help achieve these objectives?

(A). Create global secondary indexes on keys that are frequently queried Add the necessary attributes into the indexes.

(B). Create local secondary indexes on keys that are frequently queried DynamoDB will fetch needed attributes from the table .

(C). Create DynamoDB global tables to speed up query responses Use a scan to fetch data from the table.

(D). Create an AWS Auto Scaling policy for the DynamoDB table

***Answer:*** A

**QUESTION NO: 196**

A company is creating a REST service using an Amazon API Gateway with AWS Lambda integration. The service must run different versions for testing purposes.

What would be the BEST way to accomplish this?

(A). Use an X-header to denote which version is being called and pass that header to the Lambda function(s)

(B). Create an API Gateway Lambda authorizer to route API clients to the correct API version

(C). Create an API Gateway resource policy to isolate versions and provide context to the

Lambda function(s)

(D). Deploy the API versions as unique stages with unique endpoints and use stage variables to provide further context

***Answer:*** A

Explanation

The service run different versions for testing purposes. means different stages, stage variable is the way to go.

**QUESTION NO: 197**

A software engineer developed an AWS Lambda function in Node.js to do some CPUintensive data processing. With the default settings, the Lambda function takes about 5 minutes to complete.

Which approach should a developer take to increase the speed of completion''

(A). Instead of using Node js. rewrite the Lambda function using Python

(B). Instead of packaging the libraries in the ZIP file with the function move them to a Lambda layer and use the layer with the function.

(C). Allocate the maximum available CPU units lo the function

(D). Increase the available memory to the function.

***Answer:*** ~~B~~ D

Reference:  
<https://serverless.zone/my-accidental-3-5x-speed-increase-of-aws-lambda-functions-6d95351197f3>

**QUESTION NO: 198**

A Developer wants to enable AWS X-Ray for a secure application that runs in an Amazon ECS environment.

What combination of steps will enable X-Ray? (Select THREE.)

(A). Create a Docker image that runs the X-Ray daemon.

(B). Add instrumentation to the application code for X-Ray.

(C). Install the X-Ray daemon on the underlying EC2 instance.

(D). Configure and use an IAM EC2 instance role.

(E). Register the application with X-Ray.

(F). Configure and use an IAM role for tasks.

***Answer:*** A,B,F Explanation

https://docs.aws.amazon.com/xray/latest/devguide/xray-daemon-ecs.html https://docs.aws.amazon.com/xray/latest/devguide/scorekeep-ecs.html

**QUESTION NO: 199**

A company uses Amazon DynamoDB for managing and tracking orders. The DynamoDB table is partitioned based on the order date. The company receives a huge increase in orders during a sales event, causing DynamoDB writes to throttle, and the consumed throughput is far below the provisioned throughput.

According to AWS best practices, how can this issue be resolved with MINIMAL costs?

(A). Create a new DynamoDB table for every order date.

(B). Increase the read and write capacity units of the DynamoDB table.

(C). Add a random number suffix to the partition key values.

(D). Add a global secondary index to the DynamoDB table.

***Answer:*** C

Explanation

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/bp-partition-keyuniform-load.html

**QUESTION NO: 200**

NA

**QUESTION NO: 201**

A company runs its APIs using Amazon API Gateway in front of AWS Lambda functions The company wants to add logging at the API level Each API must have production and development environments The developer wants to enable different logging levels in both environments.

How can these requirements be met?

(A). Set up a stage for each environment In each stage, point to different Lambda functions that implement the logging logic m the code Access the logs in Amazon CloudWatch Logs

(B). Set up a stage for each environment In each stage, define a different logging level according to the logging requirements Access the logs in Amazon CloudWatch Logs

(C). Set up a stage and use the same Lambda functions In Amazon CloudWatch Logs set up a filter based on the log level according to the logging requirements

(D). Set up a stage for each environment In each stage, define a variable for the log level Set the value according to the logging requirements.

***Answer:*** A

**QUESTION NO: 202**

A company has three AWS Lambda functions that are written in Node js The Lambda functions include a mix of custom code and open-source modules When bugs are occasionally detected in the open-source modules, all three Lambda functions must be patched.

What is the MOST operationally efficient solution to deploy a patched open-source library for all three Lambda functions?

(A). Create a custom AWS CloudFormation public registry extension Reference a GitHub repository that hosts the open-source modules m the extension Configure Formation to scan the repository once each day Write an AWS Serverless Application Model (AWS SAM) template to redeploy the three Lambda functions upon a scan notification change. (B). Create an Amazon CloudFront distribution with an Amazon S3 bucket as the origin Upload the patched modules to Amazon S3 when needed Modify each Lambda function to download the patched modules from the CloudFront distribution during the cold start.

(C). Launch an Amazon EC2 instance Host a private open-source module registry on the

EC2 instance Upload the modified open-source modules to the private registry when needed. Modify each Lambda function deployment script to download the modules from the private registry Redeploy the three new Lambda functions.

(D). Create a Lambda layer with the open-source modules Modify all three Lambda functions to depend on the layer Remove the open-source modules from each Lambda function Patch the Lambda layer with the modified open-source modules when needed Update the Lambda functions to reference the new layer version

***Answer:*** D

**QUESTION NO: 203**

A Development team currently supports an application that uses an in-memory store to save accumulated game results. Individual results are stored in a database. As part of migrating to AWS, the team needs to use automatic scaling. The team knows this will yield inconsistent results.

Where should the team store these accumulated game results to BEST allow for consistent results without impacting performance?

(A). Amazon S3

(B). Amazon RDS

(C). Amazon ElastiCache

(D). Amazon Kinesis

***Answer:*** C

**QUESTION NO: 204**

A Developer decides lo store highly secure data in Amazon S3 and wants to implement server-side encryption (SSF) with granular control of who can access the master key Company policy requires that the master key be created, rotated, and disabled easily when needed, all for security reasons.

Which solution should be used to moot these requirements?

(A). SSE with Amazon S3 managed keys (SSE-S3)

(B). SSFE with AWS KMS managed keys (SSE KMS)

(C). SSE with AWS Secrets Manager

(D). SSE with customer provided encryption keys

***Answer:*** B

**Reference:**  
**https://www.examtopics.com/discussions/amazon/view/28423-exam-aws-certified-developer-associate-topic-1-question-245/**

**QUESTION NO: 205.** NO:

A developer is setting up Amazon API Gateway for their company's products. The API will be used by registered developers to query and update their environments. The company wants to limit the amount of requests end users can send for both cost and security reasons Management wants to offer registered developers the option of buying larger packages that allow for more requests.

How can the developer accomplish this with the LEAST amount of overhead management?

(A). Enable throttling for the API Gateway stage. Set a value for both the rate and burst capacity. If a registered user chooses a larger package, create a stage for them, adjust the values, and share the new URL with them.

(B). Set up Amazon CloudWatch API logging in API Gateway Create a filter based on the user and requestTime fields and create an alarm on this filter Write an AWS Lambda function to analyze the values and requester information, and respond accordingly Set up the function as the target for the alarm If a registered user chooses a larger package, update the Lambda code with the values.

(C). Enable Amazon CloudWatch metrics for the API Gateway stage Set up CloudWatch alarms based off the Count metric and the ApiName, Method, Resource, and Stage dimensions to alerts when request rates pass the threshold Set the alarm action to Deny If a registered user chooses a larger package create a user-specific alarm and adjust the values

(D). Set up a default usage plan, specify values for the rate and burst capacity, and associate it with a stage, if a registered user chooses a larger package, create a custom plan with the appropriate values and associate the plan with the user

***Answer:*** D

**QUESTION NO: 206**

A company is running an application on AWS Elastic Beanstalk in a single-instance environment The company's deployments must avoid any downtime Which deployment option will meet these requirements'?

(A). All at once

(B). Rolling

(C). Rolling with additional batch

(D). Immutable

***Answer:*** D  
Ref: https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/using-features.deploy-existing-version.html

**QUESTION NO: 207**

A developer must increase read performance from an unencrypted Amazon S3 bucket. The application requires 100.000 read requests each second Cost-effectiveness is a priority.

What would be the SIMPLEST approach to implement these requirements?

(A). Create 20 or more prefixes in Amazon S3 Place files by prefixes. Read in parallel by prefixes

(B). Create 20 of more AWS accounts Create a bucket in each account Read in parallel by bucket

(C). Deploy Memcached on Amazon EC2 Cache the files in memory Retrieve from the Memcached cache

(D). Copy all files to Amazon DynamoDB Index the files with S3 metadata Retrieve from

DynamoDB

***Answer:*** A -

https://docs.aws.amazon.com/AmazonS3/latest/userguide/optimizing-performance.html

**QUESTION NO: 208**

A company has implemented AWS CodeDeploy as part of its cloud native CI/CD stack The company enables automatic rollbacks while deploying a new version of a popular web application from in place to Amazon EC2.

What occurs it the deployment of the new version fails due to code regression?

(A). The last known good deployment is automatically restored using the snapshot stored in Amazon S3

(B). CodeDeploy switches the Amazon Route 53 alias records back to the known good green deployment and terminates the failed blue deployment

(C). A new deployment of the last known good version of the application is deployed with a new deployment ID

(D). AWS CodePipeline promotes the most recent deployment with a SUCCEEDED status to production

***Answer:*** B

**QUESTION NO: 209**

A company needs to encrypt data at rest, but it wants to leverage an AWS managed service using its own master key.

Which of the following AWS service can be used to meet these requirements?

(A). SSE with Amazon S3

(B). SSE with AWS KMS

(C). Client-side encryption

(D). AWS IAM roles and policies

***Answer:*** B

SSE with AWS KMS keyword: data encryption at rest

Client-side encryption: Data encryption in transit

**QUESTION NO: 210**

NA

**QUESTION NO: 211**

Company D is running their corporate website on Amazon S3 accessed from

http//www.companyd.com. Their marketing team has published new web fonts to a separate S3 bucket accessed by the S3 endpoint

https://s3-us-west-1.amazonaws.com/cdfonts. While testing the new web fonts, Company D recognized the web fonts are being blocked by the browser.

What should Company D do to prevent the web fonts from being blocked by the browser?

(A). Enable versioning on the cdfonts bucket for each web font

(B). Create a policy on the cdfonts bucket to enable access to everyone

(C). Add the Content-MD5 header to the request for webfonts in the cdfonts bucket from the website

(D). Configure the cdfonts bucket to allow cross-origin requests by creating a CORS configuration

***Answer:*** D

Explanation https://docs.aws.amazon.com/AmazonS3/latest/dev/cors.html

**QUESTION NO: 212**

A developer works in an environment with multiple AWS accounts that have AWS Lambda functions processing the same 100 KB payloads. The developer wants to centralize the point of origin of the payloads to one account and have all the Lambda functions be invoked whenever the initiating event occurs in the parent account.

How can the developer design the workflow in the MOST efficient way, so all the multiaccount Lambda functions get invoked when the event occurs?

(A). Create a Lambda function in the parent account and use cross-account IAM roles with the AWS Security Token Service (AWS STS) AssumeRole API call to make AWS Lambda invoke the API call to invoke all the cross-account Lambda functions.

(B). Subscribe all the multi-account Lambda functions to an Amazon SNS topic and make a SNS Publish API call with the payload to the SNS topic.

(C). Set up an Amazon SQS queue with the queue policy permitting the ReceiveMessage action for multi-account Lambda functions. Then send the payload to the SQS queue using the sqs:SendMessage permission and poll the queue using multi-account Lambda functions. (D). Use a worker on an Amazon EC2 instance to poll for the payload event. Invoke all Lambda functions using the Lambda Invoke API after using cross-account IAM roles with the AWS Security Token Service (AWS STS) AssumeRole API call.

***Answer:*** B Explanation https://aws.amazon.com/es/blogs/compute/cross-account-integration-with-amazon-sns/

**QUESTION NO: 213**

A Developer wants to find a list of items in a global secondary index from an Amazon DynamoDB table.

Which DynamoDB API call can the Developer use in order to consume the LEAST number of read capacity units?

(A). Scan operation using eventually-consistent reads

(B). Query operation using strongly-consistent reads

(C). Query operation using eventually-consistent reads

(D). Scan operation using strongly-consistent reads

***Answer:*** C

Explanation

- Strongly consistent reads are not supported on global secondary indexes.

- Strongly consistent reads use more throughput capacity than eventually consistent reads.

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/bp-query-scan.html

**QUESTION NO: 214**

Which of the following are good use cases for how Amazon ElastiCache can help an application? (Select TWO.)

(A). Improve the performance of S3 PUT operations

(B). Improve the latency of deployments performed by AWS CodeDeploy

(C). Improve latency and throughput for read-heavy application workloads.

(D). Reduce the time required to merge AWS CodeCommit branches

(E). Improve performance of compute-intensive applications.

***Answer:*** C,E

**QUESTION NO: 215**

A developer is writing an application in AWS Lambda To simplify testing and deployments, the developer needs the database connection string to be easily changed without modifying the Lambda code.

How can this requirement be met?

(A). Store the connection string as a secret in AWS Secrets Manager

(B). Store the connection string in an IAM user account.

(C). Store the connection string in AWS KMS

(D). Store the connection string as a Lambda layer.

***Answer:*** A

**QUESTION NO: 216**

A three-tier application hosted on AWS uses Amazon RDS for MYSQL as its database. A developer must ensure the database credentials are stored and accessed securely.

What is the MOST secure way for the developer to achieve this?

(A). Store the credentials in a configuration file and commit it to the GIT repository.

(B). Store the credentials in AWS Secrets Manager and enable automatic secret rotation.

(C). Store the credentials using Amazon RDS and enable automatic rotation

(D). Store the credentials in code and handle credentials rotation within the application.

***Answer:*** A

**Need to check .[C]**

**QUESTION NO: 217**

A developer is writing an application to analyze the traffic to a fleet of Amazon EC2 instances The EC2 instances run behind a public Application Load Balancer (ALB). An HTTP server runs on each of the EC2 instances, logging all requests to a log file.

The developer wants to capture the client public IP addresses. The developer analyzes the log files and notices only the IP address of the ALB What must the developer do to capture the client public IP addresses in the log file?

(A). Add a Host header to the HTTP server log configuration file

(B). Install the Amazon CloudWatch Logs agent on each EC2 instance. Configure the agent to write to the log file.

(C). Install the AWS X-Ray daemon on each EC2 instance Configure the daemon to write to the log file.

(D). Add an X-Forwarded-For header to the HTTP server log configuration file.

***Answer:*** C

**QUESTION NO: 218**

NA

**QUESTION NO: 219**

A developer is building a serverless application using AWS Lambda and must create a REST

API using an HTTP GET method What needs to be defined to meet this requirement? (Select

TWO )

(A). A Lambda@Edge function

(B). An Amazon API Gateway with a Lambda function

(C). An exposed GET method in an Amazon API Gateway ID.

(D). An exposed GET method in the Lambda function

(E). An exposed GET method in Amazon Route 53

***Answer:*** B,E

**QUESTION NO: 220**

Given the following AWS CloudFormation template:

What is the MOST efficient way to reference the new Amazon S3 bucket from another AWS CloudFormation template?

(A). Add an Export declaration to the outputs section of the original template and use ImportValue in other templates.

(B). Add Exported: True to the ContentBucket in the original template and use ImportResource in other templates.

(C). Create a custom AWS CloudFormation resource that gets the bucket name from the ContentBucket resource of the first stack.

(D). Use Fn: : Include to include the existing template in other template and use the ContentBucket resource directly

***Answer:*** A

Ref: https://www.examtopics.com/discussions/amazon/view/51433-exam-aws-certified-developer-associate-topic-1-question-299/

**QUESTION NO: 221**

A nightly batch job loads 1 million new records into a DynamoDB table. The records are only needed for one hour, and the table needs to be empty by the next night's batch job.

Which is the MOST efficient and cost-effective method to provide an empty table?

(A). Use DeleteItem using a ConditionExpression.

(B). Use BatchWriteItem to empty all of the rows.

(C). With a recursive function that scans and calls out DeleteItem.

(D). Create and then delete the table after the task has completed.

***Answer:*** D

Explanation

"Deleting an entire table is significantly more efficient than removing items one-by-one, which essentially doubles the write throughput as you do as many delete operations as put operations"

Ref: https://www.examtopics.com/discussions/amazon/view/5325-exam-aws-certified-developer-associate-topic-1-question-161/

**QUESTION NO: 222**

A Developer is going to deploy an AWS Lambda function that requires significant CPU utilization. Which approach will MINIMIZE the average runtime of the function?

(A). Deploy the function into multiple Availability Zones

(B). Deploy the function into multiple AWS Regions

(C). Deploy the function using Lambda layers

(D). Deploy the function with its memory allocation set to the maximum amount

***Answer:*** D   
Ref: https://www.examtopics.com/discussions/amazon/view/28838-exam-aws-certified-developer-associate-topic-1-question-214/

**QUESTION NO: 223**

Which features can be used to restrict access to data in S3? Choose 2

Answers

(A). Use S3 Virtual Hosting

(B). Set an S3 Bucket policy.

(C). Enable IAM Identity Federation.

(D). Set an S3 ACL on the bucket or the object.

(E). Create a CloudFront distribution for the bucket

***Answer:*** B,D

Explanation https://aws.amazon.com/premiumsupport/knowledge-center/secure-s3-resources/

**QUESTION NO: 224**

A company wants to implement authentication for its new REST service using Amazon API Gateway. To authenticate the calls, each request must include HTTP headers with a client ID and user ID. These credentials must be compared to authentication data in an Amazon DynamoDB table.

What MUST the company do to implement this authentication in API Gateway?

(A). Implement an AWS Lambda authorizer that references the DynamoDB authentication table

(B). Create a model that requires the credentials, then grant API Gateway access to the authentication table

(C). Modify the integration requests to require the credentials, then grant API Gateway access to the authentication table

(D). Implement an Amazon Cognito authorizer that references the DynamoDB authentication table

***Answer:*** A Explanation

https://docs.aws.amazon.com/apigateway/latest/developerguide/apigateway-use-lambdaauthorizer.html

**QUESTION NO: 225**

A company runs continuous integration/continuous delivery (CI/CD) pipeline for its application on AWS CodePipeline. A developer must write unit tests and run them as part of the pipelines before staging the artifacts for testing.

How should the Developer incorporate unit tests as part of CI/CD pipeline?

(A). Create a separate codePipline pipline to run unit tests.

(B). Update the AWS codeBuild build specification to include a phase for running unit tests.

(C). Install the AWS CodeDeploy agent on an Amazon EC2 instance to run unit tests. (D). Create a testing branch in AWS CodeCommit to run unit tests.

***Answer:*** B

**QUESTION NO: 226**

An application is using single -node Amazon ElastiCache for Redis instance to improve read performance.

Over time, demand for the application has increased exponentially, which has increased the load on the ElastiCache instance. It is critical that this cache layer handles the load and is resilient in case of node failures.

What can the Developer do to address the load and resiliency requirements?

(A). Add a read replica instance.

(B). Migrate to a Memcached cluster.

(C). Migrate to an Amazon ElastiCache service cluster. (D). Vertically scale the ElastiCache instance.

***Answer:*** A

Reference: https://docs.aws.amazon.com/AmazonElastiCache/latest/redug/Replication.Redis.Groups.html

**QUESTION NO: 227**

A company is migrating the content delivery network for its dynamic PHP website to AWS An Amazon CloudFront web distribution is part of the new infrastructure The distribution has the following cache behavior settings

* Allowed HTTP Methods is set to GET HEAD
* Viewer Protocol Policy is set to HTTP and HTTPS

Developers test the solution and can reach the company's website over HTTP and HTTPS However the developers are unable to log in to the previously working administration panel of the website Which action will resolve this login issue?

(A). Set Allowed HTTP Methods to GET, HEAD, OPTIONS

(B). Set Viewer Protocol Policy to HTTPS Only

(C). Set Allowed HTTP Methods to GET HEAD, OPTIONS PUT. POST PATCH. DELETE

(D). Set Viewer Protocol Policy to Redirect HTTP to HTTPS.

***Answer:*** D

**QUESTION NO:** 228

An Amazon DynamoDB table uses a Global Secondary Index (GSI) to support read queries.

The primary table is write-heavy, whereas the GSI is used for read operations. Looking at Amazon CloudWatch metrics, the Developer notices that write operations to the primary table are throttled frequently under heavy write activity.

However, write capacity units to the primary table are available and not fully consumed.

Why is the table being throttled?

(A). The GSI write capacity units are underprovisioned

(B). There are not enough read capacity units on the primary table

(C). Amazon DynamoDB Streams is not enabled on the table

(D). A large write operation is being performed against another table

***Answer:*** ~~A~~ Explanation D

https://stackoverflow.com/

Questions/39582752/do-global-secondary-index-gsi-in-dynamodbimpact-tables-provi

https://medium.com/@synchrophoto/amazon-dynamodb-provisioning-write-capacity-forglobal-secondary-index

**QUESTION NO: 229**

A company is using AWS CloudFormation templates to deploy AWS resources. The company needs to update one of its AWS CloudFormation stacks What can the company do to find out how the changes will impact the resources that are running?

(A). Investigate the change sets

(B). Investigate the stack policies

(C). Investigate the Metadata section.

(D). Investigate the Resources section.

***Answer:*** A

**QUESTION NO: 230**

NA

**QUESTION NO: 231**

A company's ecommerce website is experiencing massive traffic spikes, which are causing performance problems in the company database. Users are reporting that accessing the website takes a long time A developer wants to implement a caching layer using Amazon ElastiCache. The website is required to be responsive no matter which product a user views, and the updates to product information and prices must be strongly consistent

(A). Which cache writing policy will satisfy these requirements?

(B). Write to the cache directly and sync the backend at a later time.

(C). Write to the backend first and wait for the cache to expire.

(D). Write to the cache and the backend at the same time

(E). Write to the backend first and invalidate the cache

***Answer:*** ~~E~~ B

**QUESTION NO: 232**

A large e-commerce site is being designed to deliver static objects from Amazon S3. The Amazon S3 bucket wills server more than 300 GET requests per second. What should be done to optimize performance? (Select TWO.)

(A). Integrate Amazon CloudFront with Amazon S3.

(B). Enable Amazon S3 cross-region replication.

(C). Delete expired Amazon S3 server log files.

(D). Configure Amazon S3 lifecycle rules.

(E). Randomize Amazon S3 key name prefixes.

***Answer:*** A,~~E~~ B Explanation

CloudWatch definitely. Random key prefixes is still a valid method of improving performance by using parallel reads. It doesn't mention prefix hashing. For instance prefixes 1/,2/,3/,4,5/ could provide 5 x parallel streams for S3 as opposed to all objects being in a single folder/prefix e.g. dev/

https://docs.aws.amazon.com/AmazonS3/latest/dev/optimizing-performance.html "There are no limits to the number of prefixes in a bucket. You can increase your read or write performance by parallelizing reads. For example, if you create 10 prefixes in an Amazon S3 bucket to parallelize reads, you could scale your read performance to 55,000 read requests per second." The assumption that prefixes don't matter is incorrect, as described by "Amazon S3 performance guidelines recommended randomizing prefix naming with \*\*hashed characters\*\* to optimize performance for frequent data retrievals. You no longer have to randomize prefix naming for performance, and can use sequential date-based naming for your prefixes"

**QUESTION NO:** 233

When developing an AWS Lambda function that processes Amazon Kinesis Data Streams, Administrators within the company must receive a notice that includes the processed data.

How should the Developer write the function to send processed data to the Administrators?

(A). Separate the Lambda handler from the core logic

(B). Use Amazon CloudWatch Events to send the processed data

(C). Publish the processed data to an Amazon SNS topic

(D). Push the processed data to Amazon SQS

***Answer:*** ~~C~~ B

Explanation

https://stackoverflow.com/

Questions/13681213/what-is-the-difference-between-amazon-snsand-amazon-sqs

https://stackoverflow.com/

Questions/31484868/can-you-publish-a-message-to-an-sns-topicusing-an-aws-lambda

**QUESTION NO: 234**

A company has a web application that uses an Amazon Cognito user pool for authentication. The company wants to create a login page with the company logo. What should a developer do to meet these requirements?

(A). Create a hosted user interface in Amazon Cognito and customize it with the company logo

(B). Create a login page with the company logo and upload it to Amazon Cognito

(C). Create a login page in Amazon API Gateway with the logo and save the link in Amazon Cognito.

(D). Upload the logo to the Amazon Cognito app settings and point to the logo on a custom login page

***Answer:*** ~~B~~ D

**QUESTION NO: 235**

An application is running on a cluster of Amazon EC2 instance. While trying to read objects stored within a single Amazon S3 bucket that are encrypted with server-side encryption with AWS KMS managed keys (SSE-KMS), the application receives the following error:

Service : AWSKMS: Status Code: 400: Code : ThrottlingException

Which combination of steps should be taken to prevent this failure? (Select TWO.)

(A). Contact AWS Support to request an AWS KMS rate limit increase.

(B). Perform error retries with exponential backoff in the application code.

(C). Contact AWS Support to request a S3 rate limit increase.

(D). Import a customer master key (CMK) with a larger key size.

(E). Use more than one customer master key (CMK) to encrypt S3 data

***Answer:*** A,~~D~~ B

**QUESTION NO: 236**

A Developer is writing a serverless application that requires that an AWS Lambda function be invoked every 10 minutes.

What is an automated and serverless way to trigger the function?

(A). Deploy an Amazon EC2 instance based on Linux, and edit its /etc/crontab file by adding a command to periodically invoke the Lambda function.

(B). Configure an environment variable named PERIOD for the Lambda function. Set the value to 600.

(C). Create an Amazon CloudWatch Events rule that triggers on a regular schedule to invoke the Lambda function.

(D). Create an Amazon SNS topic that has a subscription to the Lambda function with a 600second timer.

***Answer:*** C Reference: https://aws.amazon.com/blogs/architecture/a-serverless-solution-for-invoking-aws-lambda-atasub-minute-freque

**QUESTION NO: 237**

An organization is storing large files in Amazon S3, and is writing a web application to display meta-data about the files to end-users. Based on the metadata a user selects an object to download. The organization needs a mechanism to index the files and provide single-digit millisecond latency retrieval for the metadata. What AWS service should be used to accomplish this?

(A). Amazon DynamoDB

(B). Amazon EC2

(C). AWS Lambda

(D). Amazon RDS

***Answer:*** A

Explanation

Amazon DynamoDB is a fast and flexible NoSQL database service for all applications that need consistent, single-digit millisecond latency at any scale. It is a fully managed database and supports both document and key-value data models. Its flexible data model and reliable performance make it a great fit for mobile, web, gaming, ad-tech, Internet of Things (IoT), and many other applications. References:

**QUESTION NO: 238**

An application running on Amazon EC2 opens connections to an Amazon RDS SQL Server database The developer does not want to store the user name and password for the database in the code. The developer would also like to automatically rotate the credentials.

What is the MOST secure way to store and access the database credentials?

(A). Create an IAM role that has permissions to access the database Attach the role to the

EC2 instance

(B). Use AWS Secrets Manager to store the credentials. Retrieve the credentials from

Secrets Manager as needed

(C). Store the credentials in an encrypted text file in an Amazon S3 bucket Configure the EC2 instance's user data to download the credentials from Amazon S3 as the instance boots (D). Store the user name and password credentials directly in the source code. No further action is needed because the source code is stored in a private repository.

***Answer:*** B

**QUESTION NO: 239**

A developer Is designing an AWS Lambda function that create temporary files that are less than 10 MB during execution. The temporary files will be accessed and modified multiple times during execution. The developer has no need to save or retrieve these files in the future.

Where should the temporary file be stored?

(A). the /tmp directory

(B). Amazon EFS

(C). Amazon EBS

(D). Amazon S3

***Answer:*** A

**QUESTION NO: 240**

NA

**QUESTION NO: 241**

A Developer is asked to implement a caching layer in front of Amazon RDS. Cached content is expensive to regenerate in case of service failure. Which implementation below would work while maintaining maximum uptime?

(A). Implement Amazon ElastiCache Redis in Cluster Mode

(B). Install Redis on an Amazon EC2 instance.

(C). Implement Amazon ElastiCache Memcached. (D). Migrate the database to Amazon Redshift.

***Answer:*** A Explanation https://docs.aws.amazon.com/AmazonElastiCache/latest/mem-ug/SelectEngine.html

**QUESTION NO: 242**

An ecommerce application is using Amazon Simple Notification Service (Amazon SNS) with an AWS Lambda subscription to save all new orders into an Amazon DynamoDB table The company wants to record all the orders that are more than a certain amount of money in a separate table The company wants to avoid changes to the processes that post orders to Amazon SNS or the current Lambda function that saves the orders to the DynamoDB table How can a developer implement this feature with the LEAST change to the existing application?

(A). Create another Lambda subscription with the SNS message attribute value matching a filter option to save the appropriate orders to a separate table.

(B). Create another SNS topic, and also send orders in that topic Create a Lambda subscription with a numeric value filter option to save the appropriate orders to a separate table.

(C). Create another Lambda subscription with the SNS message numeric value matching a filter option to save the appropriate orders to a separate table.

(D). Modify the Lambda code to filter the orders and save the appropriate orders to a separate table

***Answer:*** D

**QUESTION NO: 243**

A company has an AWS CloudFormation template that is stored as a single file. The template is able to launch and create a full infrastructure stack.

Which best practice would increase the maintainability of the template?

(A). Use nested stacks for common template patterns.

(B). Embed credentials to prevent typos.

(C). Remove mappings to decrease the number of variables.

(D). Use AWS::Include to reference publicly-hosted template files.

***Answer:*** A

**QUESTION NO: 244**

A company is launching a poling application. The application will store the results of each pool an Amazon DynamoDB table. Management wants to remove pool data after a few data and store an archive of those records in Amazon S3.

Which approach would allow the application to archive each poll's data while keeping complexity to a MINIMUM?

(A). Enable Time to Live (TTL) on the DynamoDB table. Enable DynamoDB Streams on the table and store the records removed from the stream in Amazon S3.

(B). Schedule an AWS Lambda function to periodically scan the DynamoDB table. Use the BatchWritten operation to delete the results of a scan Enable DynamoDB Stream on the table and store the records removed from the stream in Amazon S3.

(C). Enable DynamoDB Streams on the table. Configure the steam as trigger for AWS Lambda. Save records to Amazon S3 when records on the stream are modified.

(D). Enable cross-Region replication on the S3 bucket to achieve the poll data.

***Answer:*** C

**QUESTION NO: 245**

A developer has a legacy application that is hosted on-premises Other applications hosted on AWS depend on the on-premises application for proper functioning In case of any application errors, the developer wants to be able to use Amazon CloudWatch to monitor and troubleshoot all applications from one place.

How can the developer accomplish this?

(A). Install an AWS SDK on the on-premises server to automatically send logs to CloudWatch

.

(B). Download the CloudWatch agent to the on-premises server Configure the agent to use

IAM user credentials with permissions for CloudWatch

(C). Upload log files from the on-premises server to Amazon S3 and have CloudWatch read the files

(D). Upload log files from the on-premises server to an Amazon EC2 instance and have the instance forward the logs to CloudWatch.

***Answer:*** B Reference: https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/install-CloudWatchAgent-onpremise.Html

**QUESTION NO: 246**

A development team decides to adopt a continuous integration/continuous delivery (CI/CD) process using AWS CodePipehne and AWS CodeCommit for a new application. However, management wants a person to review and approve the code before it is deployed to production How can the development team add a manual approver to the CI/CD pipeline?

(A). Use AWS SES to send an email to approvers when their action is required Develop a simple application that allows approvers to accept or reject a build Invoke an AWS Lambda function to advance the pipeline when a build is accepted

(B). If approved, add an approved tag when pushing changes to the CodeCommit repository. CodePipeiine will proceed to build and deploy approved commits without interruption

(C). Add an approval step to CodeCommit Commits will not be saved until approved.

(D). Add an approval action to the pipeline. Configure the approval action to publish to an Amazon SNS topic when approval is required. The pipeline execution will stop and wait for an approval

***Answer:*** D

**QUESTION NO: 247**

A developer is using Amazon S3 as the event source that invokes a Lambda function when new objects are created in the bucket The event source mapping Information Is stored in the bucket notification configuration The developer is working with different versions of the Lambda function, and has a constant need to update notification configuration so that Amazon S3 invokes the correct version What is the MOST efficient and effective way to achieve mapping Between the S3 event and Lambda?

(A). Use a different Lambda trigger

(B). Use Lambda environment variables

(C). Use a Lambda alias

(D). Use Lambda tags.

***Answer:*** A

**QUESTION NO: 248**

A customer wants to deploy its source code on an AWS Elastic Beanstalk environment. The customer needs to perform deployment with minimal outage and should only use existing instances to retain application access log.

What deployment policy would satisfy these requirements?

(A). Rolling

(B). All at once

(C). Rolling with an additional batch

(D). Immutable

***Answer:*** A

**QUESTION NO: 249**

Which DynamoDB limits can be raised by contacting AWS support? Choose 2

Answers

(A). The number of hash keys per account

(B). The maximum storage used per account

(C). The number of tables per account

(D). The number of local secondary indexes per account

(E). The number of provisioned throughput units per account

***Answer:*** C,E Explanation https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Limits.html

**QUESTION NO: 250**

NA

**QUESTION NO: 251**

A company hosts a client-side web application for one of its subsidiaries on Amazon S3. The

web application can be accessed through Amazon CloudFront from

https://www.example.com. After a successful rollout, the company wants to host three more client-side web applications for its remaining subsidiaries on three separate S3 buckets. To achieve this goal, a developer moves all the common JavaScript files and web fonts to a central S3 bucket that serves the web applications. However, during testing, the developer notices that the browser blocks the JavaScript files and web fonts.

What should the developer do to prevent the browser from blocking the JavaScript files and web fonts?

(A). Create four access points that allow access to the central S3 bucket. Assign an access point to each web application bucket.

(B). Create a bucket policy that allows access to the central S3 bucket. Attach the bucket policy to the central S3 bucket.

(C). Create a cross-origin resource sharing (CORS) configuration that allows access to the central S3 bucket.

Add the CORS configuration to the central S3 bucket.

(D). Create a Content-MD5 header gngthat provides a message integrity check for the central S3 bucket. insert the Content-MD5 header for each web application request.

***Answer:*** C

QUESTION NO: 252

A company is developing a new online game that will run on top of Amazon ECS. Four distinct Amazon ECS services will be part of the architecture, each requiring specific permissions to various AWS services. The company wants to optimize the use of the underlying Amazon EC2 instances by bin packing the containers based on memory reservation.

Which configuration would allow the Development team to meet these requirements MOST securely?

(A). Create a new Identity and Access Management (IAM) instance profile containing the required permissions for the various ECS services, then associate that instance role with the underlying EC2 instances.

(B). Create four distinct IAM roles, each containing the required permissions for the associated ECS service, then configure each ECS service to reference the associated IAM role.

(C). Create four distinct IAM roles, each containing the required permissions for the associated ECS service, then, create an IAM group and configure the ECS cluster to reference that group.

(D). Create four distinct IAM roles, each containing the required permissions for the associated ECS service, then configure each ECS task definition to referene the associated IAM role.

***Answer:*** ~~D~~ C ok

Explanation

https://docs.aws.amazon.com/AmazonECS/latest/developerguide/task-placementstrategies.html.

**QUESTION NO: 253**

company needs a fully-managed source control service that will work in AWS. The service must ensure that revision control synchronizes multiple distributed repositories by exchanging sets of changes peer-to-peer. All users need to work productively even when not connected to a network.

Which source control service should be used?

(A). Subversion

(B). AWS CodeBuild

(C). AWS CodeCommit

(D). AWS CodeStar

***Answer:*** C ok

QUESTION NO: 254

A Developer must re-implement the business logic for an order fulfilment system. The business logic has to make requests to multiple vendors to decide where to purchase an item. The whole process can take up to a week to complete.

What is the MOST efficient and SIMPLEST way to implement a system that meets these requirements?

(A). Use AWS Step Functions to execute parallel Lambda functions, and join the results. (B). Create an AWS SQS for each vendor, poll the queue from a worker instance, and joint the results.

(C). Use AWS Lambda to asynchronously call a Lambda function for each vendor, and join the results.

(D). Use Amazon CloudWatch Events to orchestrate the Lambda functions.

***Answer:*** ~~A~~ D

https://aws.amazon.com/step-functions/

QUESTION NO: 255

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~~ A ok

**QUESTION NO: 256**

A company is using continuous integration/continuous deliver (CI/CD) system. A developer must automate the deployment of an application software package to Amazon EC2 instances and virtual servers that run on premises.

Which AWS services should the developer use to meet these requirements?

(A). AWS Cloud9

(B). AWS CodeBuild

(C). AWS Elastic Beanstalk

(D). AWS CodeDeploy

***Answer:*** D ok

**QUESTION NO: 257**

NA

**QUESTION NO: 258**

NA

**QUESTION NO: 259**

Which EC2 API call would you use to retrieve a list of Amazon Machine Images (AMIs)?

(A). DescnbeInstances

(B). DescribeAMls

(C). DescribeImages

(D). GetAMls

(E). You cannot retrieve a list of AMIs as there are over 10,000 AMIs

***Answer:*** ~~C~~ E ok

Explanation

https://docs.aws.amazon.com/AWSEC2/latest/APIReference/API\_DescribeImages.html Describes the specified images (AMIs, AKIs, and ARIs) available to you or all of the images available to you.

**QUESTION NO: 260**

Where should the appspec.yml file be placed in order for AWS CodeDeploy to work?

(A). In the root of the application source code directory structure

(B). In the bin folder along with all the complied code

(C). In an S3 bucket

(D). In the same folder as the application configuration files

***Answer:*** A ok

https://docs.aws.amazon.com/codedeploy/latest/userguide/reference-appspec-file.html

**QUESTION NO: 261**

NA

**QUESTION NO: 262**

A large company has its application components distributed across.. company needs to collect and visualize trace data across these accounts.

What should be used to meet these requirements?

(A). AWS X-Ray

(B). Amazon CloudWatch

(C). Amazon VPC flow logs

(D). Amazon Elasticsearch Service

***Answer:*** A ok

https://aws.amazon.com/xray/

**QUESTION NO: 263**

A developer has written a multi-threaded application that is running on a fleet of Amazon EC2 instances. The operations team has requested a graphical method to monitor the number of running threads over time.

What is the MOST efficient way to fulfill this request?

(A). Periodically send the thread count to AWS X-Ray segments, then generate a service graph on demand

(B). Create a custom Amazon CloudWatch metric and periodically perform a PutMetricData call with the current thread count.

(C). Periodically log thread count data to Amazon S3. Use Amazon Kinesis to process the data into a graph.

(D). Periodically write the current thread count to a table using Amazon DynarnoDB and use Amazon CloudFront to create a graph

***Answer:*** B

https://docs.aws.amazon.com/AmazonCloudWatch/latest/APIReference/API\_PutMetricData.html

**QUESTION NO: 264**

A developer is implementing authentication and authorization for an application. The developer needs to ensure that the user credentials are never exposed. Which approach should the developer take to meet this requirement?

(A). Store the user credentials In Amazon DynamoDB Build an AWS Lambda function to validate the credentials and authorize users

(B). Deploy a custom authentication and authorization API on an Amazon EC2 instance. Store the user credentials in Amazon S3 and encrypt the credentials using Amazon S3 server-side encryption.

(C). Use Amazon Cognito to configure a user pool, and use the Cognito API to authenticate and authorize the user

(D). Store the user credentials In Amazon RDS Enable the encryption option for the Amazon RDS D8 instances Build an API using AWS Lambda to validate the credentials and authorize users

***Answer:*** C

https://aws.amazon.com/blogs/mobile/understanding-amazon-cognito-user-pool-oauth-2-0-grants/

**QUESTION NO: 265**

A development team is building a new application that will run on Amazon EC2 and use Amazon DynamoDB as a storage layer The developers all have assigned IAM user accounts in the same IAM group The developers currently can launch EC2 instances and they need to

be able to launch EC2 instances with an instance role allowing access to Amazon DynamoDB.

Which AWS I AM changes are needed when creating an instance role to provide this functionality

(A). Create an IAM permission policy attached to the role that allows access to DynamoDB Add a trust policy to the role that allows DynamoDB to assume the role Attach a permissions policy to the development group in AWS IAM that allows developers to use the IAM GetRole and IAM PassRole permissions for the role

(B). Create an IAM permissions policy attached to the role that allows access to DynamoDB

Add a trust policy to the role that allows Amazon EC2 to assume the role Attach a

permissions policy to the development group in AWS IAM that allows developers to use the

IAM PassRole permission for the role

(C). Create an IAM permission policy attached to the role that allows access to Amazon EC2 Add a trust policy to the role that allows DynamoDB to assume the role Attach a permissions policy to the development group in AWS IAM that allows developers to use the IAM PassRole permission for the role

(D). Create an IAM permissions policy attached to the role that allows access to DynamoDB

Add a trust policy to the role that allows Amazon EC2 to assume the role Attach a permissions policy to the development group in AWS IAM that allows developers to use the iam GetRole permission for the role.

***Answer:*** B

https://docs.aws.amazon.com/glue/latest/dg/attach-policy-iam-user.html

**QUESTION NO: 266**

A developer has created a Node js web application on a local development machine. The developer wants to use AWS technology to host the website. The developer needs a solution that requires the least possible operational overhead and no code changes.

Which AWS service should the developer use to meet these requirements?

(A). AWS Elastic Beanstalk

(B). Amazon EC2

(C). AWS Lambda

(D). Amazon Elastic Kubernetes Service (Amazon EKS)

***Answer:*** A ok

https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/nodejs-devenv.html

**QUESTION NO: 267**

A developer from AnyCompany's AWS account needs access to the Example Corp AWS account AnyCompany uses an identity provider that is compatible with OpenID Connect.

What is the MOST secure way for Example Corp to allow developer access?

(A). Create a cross-account role and call the AssumeRole API operation

(B). Create a user in the Example Corp account and provide the access keys

(C). Create a user in the Example Corp account and provide the credentials

(D). Create a cross-account role and call the AssumeRoleWithWebldentity API operation

***Answer:*** B ok

**QUESTION NO: 268**

When using the AWS Encryption SDK now does the developer keep track of the data encryption keys used to encrypt data?

(A). The developer must manually Keep track of the data encryption keys used for each data object

(B). The SDK encrypts the data encryption key and stores it (encrypted) as part of the returned ciphertext

(C). The SDK stores the data encryption keys automatically m Amazon S3

(D). The data encryption key is stored in the userdata for the EC2 instance

***Answer:*** B pending

**QUESTION NO: 269**

After installing the AWS CLI, a Developer tries to run the command aws configure but receives the following error:

Error: aws: command not found

What is the most likely cause of this error?

(A). The aws executable is not in the PATH environment variable.

(B). Access to the aws executable has been denied to the installer.

(C). Incorrect AWS credentials were provided.

(D). The aws script does not have an executable file mode.

***Answer:*** A Explanation <https://docs.aws.amazon.com/cli/latest/userguide/cli-chap-troubleshooting.html>

ok

**QUESTION NO: 270**

(A). Sign the AWS CLI command using the signature version 4 process.

(B). Run the aws configure AWS CLI command and specify the access key id and secret access key.

(C). Specify a role for the EC2 instance with the necessary privileges.

(D). Pass the access key id and secret access key as parameters for each AWS CLI command.

***Answer:*** C ok

**QUESTION NO: 271**

A Developer is developing an application that manages financial transactions. To improve security, multi-factor authentication (MFA) will be required as part of the login protocol.

What services can the Developer use to meet these requirements?

(A). Amazon DynamoDB to store MFA session data, and Amazon SNS to send MFA codes

(B). Amazon Cognito with MFA

(C). AWS Directory Service

(D). AWS IAM with MFA enabled

***Answer:*** B

Explanation

AWS documentation - Cognito MFA Managing Security

You can add multi-factor authentication (MFA) to a user pool to protect the identity of your users. MFA adds a second authentication method that doesn't rely solely on user name and password. You can choose to use SMS text messages, or time-based one-time (TOTP) passwords as second factors in signing in your users. You can also use adaptive authentication with its risk-based model to predict when you might need another authentication factor. It's part of the user pool advanced security features, which also include protections against compromised credentials.

ok

**QUESTION NO: 272**

An application takes 40 seconds to process instructions received in an Amazon SQS message.

Assuming the SQS queue is configured with the default VisibilityTimeout value, what is the BEST way, upon receiving a message, to ensure that no other instances can retrieve a message that has already been processed or is currently being processed?

(A). Use the ChangeMessageVisibility API to increase the VisibilityTimeout, then use the DeleteMessage API to delete the message.

(B). Use the DeleteMessage API call to delete the message from the queue, then call DeleteQueue API to remove the queue.

(C). Use the ChangeMessageVisibility API to decrease the timeout value, then use the DeleteMessage API to delete the message.

(D). Use the DeleteMessageVisibility API to cancel the VisibilityTimeout, then use the DeleteMessage API to delete the message.

***Answer:*** A Explanation

https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqsvisibility-timeout.html In SQS, messages remain there. It is the consumer's responsibility to delete it, once consumed and processed.

**Ok**

**QUESTION NO: 273**

A company has written a Java AWS Lambda function to be triggered whenever a user uploads an image to an Amazon S3 bucket. The function converts the original image to several different formats and then copies the resulting images to another Amazon S3 bucket. The Developers find that no images are being copied to the second Amazon S3 bucket. They have tested the code on an Amazon EC2 instance with 1GB of RAM, and it takes an average of 500 seconds to complete.

What is the MOST likely cause of the problem?

(A). The Lambda function has insufficient memory and needs to be increased to 1 GB to match the Amazon EC2 instance

(B). Files need to be copied to the same Amazon S3 bucket for processing, so the second bucket needs to be deleted.

(C). Lambda functions have a maximum execution limit of 300 seconds, therefore the function is not completing.

(D). There is a problem with the Java runtime for Lambda, and the function needs to be converted to node.js.

***Answer:*** A

**QUESTION NO: 274**

A company has an internal website that gives users the ability to access contract data that is stored in an Amazon RDS DB instance The number of contracts has increased, and several users have reported slow retrieval of the contract data.

The company wants to set up a cache to improve the latency A developer must create a solution that ensures data resiliency. The data must be encrypted and must be partitioned by department Which solution will meet these requirements?

(A). Amazon ElastiCache for Memcached with cluster mode enabled

(B). Amazon ElastiCache for Redis with cluster mode enabled

(C). Amazon ElastiCache for Redis with cluster mode disabled

(D). Amazon ElastiCache for Memcached with cluster mode disabled

***Answer:*** A pending

**QUESTION NO: 275**

An application stops working with the following error: The specified bucket does not exist.

Where is the BEST place to start the root cause analysis?

(A). Check the Elastic Load Balancer logs for DeleteBucket requests.

(B). Check the application logs in Amazon CloudWatch Logs for Amazon S3 DeleteBucket errors.

(C). Check AWS X-Ray for Amazon S3 DeleteBucket alarms.

(D). Check AWS CloudTrail for a DeleteBucket event.

***Answer:*** D ok

**QUESTION NO: 276**

Company

C is currently hosting their corporate site in an Amazon S3 bucket with Static Website Hosting enabled.

Currently, when visitors go to http://www.companyc.com the index.html page is returned. Company C now would like a new page welcome.html to be returned when a visitor enters http://www.companyc.com in the browser.

Which of the following steps will allow Company C to meet this requirement? Choose 2

Answers

(A). Upload an html page named welcome.html to their S3 bucket

(B). Create a welcome subfolder in their S3 bucket

(C). Set the Index Document property to welcome.html

(D). Move the index.html page to a welcome subfolder

(E). Set the Error Document property to welcome.html

***Answer:*** A,C Explanation

https://docs.aws.amazon.com/AmazonS3/latest/dev/WebsiteHosting.html https://docs.aws.amazon.com/AmazonS3/latest/dev/HostingWebsiteOnS3Setup.html

**QUESTION NO: 277**

A Developer needs temporary access to resources in a second account.

What is the MOST secure way to achieve this?

(A). Use the Amazon Cognito user pools to get short-lived credentials for the second account.

(B). Create a dedicated IAM access key for the second account, and send it by mail.

(C). Create a cross-account access role, and use sts:AssumeRole API to get short-lived credentials.

(D). Establish trust, and add an SSH key for the second account to the IAM user.

***Answer:*** C

**QUESTION NO: 278**

Which of the following services are key/value stores? Choose 3

Answers

(A). Amazon ElastiCache

(B). Simple Notification Service

(C). DynamoDB

(D). Simple Workflow Service

(E). Simple Storage Service

***Answer:*** A,C,E

**QUESTION NO: 279**

A developer is building a static, client-side rendered website that is powered by ReactJS The code has no server-side generated components and does not need to run any programming languages on the server However the code serves static HTML, CSS, and JavaScript to the client on each request The developer's solution to host the website must maximize performance and cost-effectiveness Which combination of AWS services or resources should the developer use to meet these requirements?

(A). Application Load Balancer and Amazon EC2

(B). Amazon API Gateway and AWS Lambda

(C). Amazon CloudFront and Amazon S3

(D). Amazon CloudFront and AWS Elastic Beanstalk

***Answer:*** C

**QUESTION NO: 280**

NA

**QUESTION NO: 281**

A developer has written an application that runs on Amazon EC2 instances and generates a value every minute. The Developer wants to monitor and graph the values generated over time without logging in to the instance each time.

Which approach should the Developer use to achieve this goal?

(A). Use the Amazon CloudWatch metrics reported by default for all EC2 instances View each value from the CloudWatch console.

(B). Develop the application to store each value in a file on Amazon S3 every minute with the

Umestamp as the name

(C). Publish each generated value as a custom metric to Amazon CloudWatch using available AWS SDKs

(D). Store each value as a variable and add the variable to the list of EC2 metrics that should be reported to the Amazon CloudWatch console

***Answer:*** C

**QUESTION NO: 282**

If an application is storing hourly log files from thousands of instances from a high traffic web site, which naming scheme would give optimal performance on S3?

(A). Sequential

(B). instanceID\_log-HH-DD-MM-YYYY

(C). instanceID\_log-YYYY-MM-DD-HH

(D). HH-DD-MM-YYYY-log\_instanceID

(E). YYYY-MM-DD-HH-log\_instanceID

***Answer:*** B Reference: https://acloud.guru/forums/aws-certified-developer-associate/discussion/-KU2dEtJbLI5lSbH\_S4/if-an-applicatio

**QUESTION NO: 283**

For a deployment using AWS CodeDeploy, what is the run order of the hooks for in-place deployments?

(A). Before Install -> Application Stop -> Application Start -> After Install

(B). Application Stop -> Before Install -> After Install -> Application Start

(C). Before Install -> Application Stop -> Validate Service -> Application Start (D). Application Stop -> Before Install -> Validate Service -> Application Start

***Answer:*** B

**QUESTION NO: 284**

An organization is using Amazon CloudFront to ensure that its users experience low-latency access to its web application. The organization has identified a need to encrypt all traffic between users and CloudFront, and all traffic between CloudFront and the web application.

How can these requirements be met? (Choose two.)

(A). Use AWS KMS to encrypt traffic between CloudFront and the web application.

(B). Set the Origin Protocol Policy to "HTTPS Only".

(C). Set the Origin's HTTP Port to 443.

(D). Set the Viewer Protocol Policy to "HTTPS Only" or "Redirect HTTP to HTTPS".

(E). Enable the CloudFront option Restrict Viewer Access.

***Answer:*** A,B -- B,D Explanation

https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/using-httpsviewers-to-cloudfront.html

https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/using-httpscloudfront-to-custom-origi

**QUESTION NO: 285**

A Developer has published an update to an application that is served to a global user base using Amazon CloudFront. After deploying the application, users are not able to see the updated changes.

How can the Developer resolve this issue?

(A). Remove the origin from the CloudFront configuration and add it again.

(B). Disable forwarding of query strings and request headers from the CloudFront distribution configuration.

(C). Invalidate all the application objects from the edge caches.

(D). Disable the CloudFront distribution and enable it again to update all the edge locations.

***Answer:*** C

Explanation https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/Invalidation.html

**QUESTION NO: 286**

A company has an application that logs all information to Amazon S3. Whenever there is a new log file, an AWS Lambda function is invoked to process the log files. The code works, gathering all of the necessary information. However, when checking the Lambda function logs, duplicate entries with the same request ID are found.

What is causing the duplicate entries?

(A). The S3 bucket name was specified incorrectly.

(B). The Lambda function failed, and the Lambda service retired the invocation with a delay.

(C). There was an S3 outage, which caused duplicate entries of the sale log file.

(D). The application stopped intermittently and then resumed.

***Answer:*** B Explanation https://docs.aws.amazon.com/lambda/latest/dg/API\_Invoke.html

**QUESTION NO: 287**

NA

**QUESTION NO: 288**

A Developer is creating a web application that requires authentication, but also needs to support guest access to provide users limited access without having to authenticate. What service can provide support for the application to allow guest access?

(A). IAM temporary credentials using AWS STS.

(B). Amazon Directory Service

(C). Amazon Cognito with unauthenticated access enabled

(D). IAM with SAML integration

***Answer:*** C

Explanation

https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/serverlessgetting-started-hello

https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/sam-clicommand-reference-sa

https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/sam-clicommand-reference-sa

**QUESTION NO: 289**

A photo sharing website gets millions of new images every week The images are stored in Amazon S3 under a formatted date prefix A developer wants to move images to a few S3 buckets for analysis and further processing Images are not required to be moved in real time What is the MOST efficient method for performing this task?

(A). Use S3 PutObject events to Invoke AWS Lambda Then Lambda will copy the files to the other objects

(B). Create an AWS Lambda function that will pull a day of Images from the origin bucket and copy them to the other buckxc ets.

(C). Use S3 Batch Operations to create jobs for images to be copied to each Individual bucket.

(D). Use Amazon EC2 to batch pull images from multiple days and copy them to the other buckets

***Answer:*** D

**QUESTION NO: 290**

A meteorological system monitors 600 temperature gauges, obtaining temperature samples every minute and saving each sample to a DynamoDB table. Each sample involves writing 1K of data and the writes are evenly distributed over time.

How much write throughput is required for the target table?

(A). 1 write capacity unit

(B). 10 write capacity units

(C). 60 write capacity units

(D). 600 write capacity units

(E). 3600 write capacity units

***Answer:*** B Explanation

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.ReadWr iteCapacityMode.ht

**QUESTION NO: 291**

A development team is working on a mobile app that allows users to upload pictures to Amazon S3 The team expects the app will be used by hundreds of thousands of users during a single event simultaneously Once the pictures are uploaded, the backend service will scan and parse the pictures for inappropriate content.

Which approach is the MOST resilient way to achieve this goal which also smooths out temporary volume spikes for the backend service?

(A). Develop an AWS Lambda function to check the upload folder in the S3 bucket. If new uploaded pictures are detected, the Lambda function will scan and parse them

(B). Once a picture is uploaded to Amazon S3: publish the event to an Amazon SQS queue. Use the queue as an event source to trigger an AWS Lambda function In the Lambda function scan and parse the picture.

(C). When the user uploads a picture, invoke an API hosted in Amazon API Gateway. The

API will invoke an AWS Lambda function to scan and parse the picture

(D). Create a state machine in AWS Step Functions to check the upload folder in the S3 bucket. If a new picture is detected, invoke an AWS Lambda function to scan and parse it.

***Answer:*** B

**QUESTION NO: 292**

Company A has an S3 bucket containing premier content that they intend to make available to only paid subscribers of their 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 Company A provide only paid subscribers the ability to download a premier content file in the S3 bucket?

(A). Apply a bucket policy that grants 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 nonpaying website visitors

***Answer:*** B

**QUESTION NO: 293**

A company is using Amazon RDS MySQL instances for its application database tier and Apache Tomcat servers for its web tier. Most of the database queries from web applications are repeated read requests.

Use of which AWS service would increase in performance by adding in-memory store for repeated read queries? (A). Amazon RDS Multi-AZ

(B). Amazon SQS

(C). Amazon ElastiCache

(D). Amazon RDS read replica

***Answer:*** C

**QUESTION NO: 294**

NA

**QUESTION NO: 295**

A company has a web application In an Amazon Elastic Container Service (Amazon ECS) cluster running hundreds of secure services in AWS Fargate containers. The services are in target groups routed by an Application Load Balancer (ALB) Application users log in to the website anonymously, but they must be authenticated using any OpenID Connect protocolcompatible identity provider (IdP) to access the secure services Which authentication approach would meet these requirements with the LEAST amount of effort?

(A). Configure the services to use Amazon Cognito.

(B). Configure the ALB to use Amazon Cognito

(C). Configure the services to use AWS Security Token Service (AWS STS) with the OpenID Connect IdP.

(D). Configure the Amazon ECS cluster to use AWS Security Token Service (AWS STS) with the OpenID Connect IdP

***Answer:*** A

**QUESTION NO: 296**

A company is adding stored value for gift card) capability to its highly popular casual gaming website. Users need to be able to trade this value for other users' items on the platform. This would require both users' records be updated as a single transaction, or both users' records to be completely rolled back.

Which AWS database options can provide the transactional capability required for this new feature? (Select TWO )

(A). Amazon DynamoDB with operations made with the ConsistentRead parameter set to true

(B). Amazon ElastiCache for Memcached with operations made within a transaction block

(C). Amazon Aurora MySQL with operations made within a transaction block

(D). Amazon DynamoDB with reads and writes made using Transact" operations

(E). Amazon Redshift with operations made within a transaction block

***Answer:*** C,D

**QUESTION NO: 297**

A company has three different environments: Development, QA, and Production. The company wants to deploy its code first in the Development environment, then QA, and then Production.

Which AWS service can be used to meet this requirement?

(A). Use AWS CodeCommit to create multiple repositories to deploy the application.

(B). Use AWS CodeBuild to create, configure, and deploy multiple build application projects. (C). Use AWS Data Pipeline to create multiple data pipeline provisions to deploy the application.

(D). Use AWS CodeDeploy to create multiple deployment groups.

***Answer:*** D

Explanation

https://docs.aws.amazon.com/codedeploy/latest/userguide/deployment-groups.html "You can associate more than one deployment group with an application in CodeDeploy. This makes it possible to deploy an application revision to different sets of instances at different times. For example, you might use one deployment group to deploy an application revision to a set of instances tagged Test where you ensure the quality of the code. Next, you deploy the same application revision to a deployment group with instances tagged Staging for additional verification. Finally, when you are ready to release the latest application to customers, you deploy to a deployment group that includes instances tagged Production. "

**QUESTION NO: 298**

A Developer has created a large Lambda function, and deployment is failing with the following error:

ClientError: An error occurred (InvalidParameterValueException) when calling the CreateFunction operation: Unzipped size must be smaller than XXXXXXXXX bytes', where XXXXXXXXX is the current Lambda limit What can the Developer do to fix this problem? (A). Submit a limit increase request to AWS Support to increase the function to the size needed.

(B). Use a compression algorithm that is more efficient than ZIP.

(C). Break the function into multiple smaller Lambda functions. (D). ZIP the ZIP file twice to compress it further.

***Answer:*** C

**QUESTION NO: 299**

A company experienced partial downtime during the last deployment of a new application AWS Elastic Beanstalk split the environment's Amazon EC2 instances into batches and deployed a new version one batch at a time after taking them out of service. Therefore, full capacity was not maintained during deployment.

The developer plans to release a new version of the application, and is looking for a policy that will maintain full capacity and minimize the impact of the failed deployment Which deployment policy should the developer use?

(A). Immutable

(B). All at Once

(C). Rolling

(D). Rolling with an Additional Batch

***Answer:*** D

**QUESTION NO: 300**

A development team is designing a mobile app that requires multi-factor authentication

Which steps should be taken to achieve this? (Select TWO)

(A). Use Amazon Cognito to create a user pool and create users in the user pool

(B). Send multi-factor authentication text codes to users with the Amazon SNS Publish API call in the app code

(C). Enable multi-factor authentication for the Amazon Cognito user pool

(D). Use AWS IAM to create IAM users

(E). Enable multi-factor authentication for the users created in AWS IAM.

***Answer:*** A,C

**QUESTION NO: 301**

NA

**QUESTION NO: 302**

A software company needs to make sure user-uploaded documents are securely stored in Amazon S3. The documents must be encrypted at rest in Amazon S3. The company does not want to manage the security infrastructure in-house, but the company still needs extra protection to ensure it has control over its encryption keys due to industry regulations Which encryption strategy should a developer use to meet these requirements?

(A). Server-side encryption with Amazon S3 managed keys (SSE-S3)

(B). Server-side encryption with customer-provided encryption keys (SSE-C)

(C). Server-side encryption with AWS KMS managed keys (SSE-KMS)

(D). Client-side encryption

***Answer:*** B

"When you use server-side encryption with AWS KMS (SSE-KMS), you can use the default AWS managed key, or you can specify a customer managed key that you have already created. AWS KMS uses envelope encryption to further protect your data. Envelope encryption is the practice of encrypting your plaintext data with a data key, and then encrypting that data key with a root key."

Link - https://docs.aws.amazon.com/AmazonS3/latest/userguide/UsingKMSEncryption.html

**QUESTION NO: 303**

A developer is building a highly secure healthcare application using .. application requires writing temporary data to /tmp storage on an AWS Lambda function.

How should the developer encrypt this data?

(A). Enable Amazon EBS volume encryption with an AWS KMS .. configuration so that all storage attached to the Lambda function is encrypted.

(B). Set up the Lambda function with a role and key policy to access an AWS KMS CMK Use the CMK to generate a data key used to encrypt all data prior to writing to /tmp storage

(C). Use OpenSSL to generate a symmetric encryption key on Lambda startup Use this key to encrypt the data prior to writing to /tmp

(D). Use an on-premises hardware security module (HSM) to generate keys where the Lambda function requests a data key from the HSM and uses that to encrypt data on all requests to the function

***Answer:*** B

https://docs.aws.amazon.com/whitepapers/latest/security-overview-aws-lambda/security-overview-aws-lambda.pdf

**QUESTION NO: 304**

A developer has an AWS CodePipelme pipeline that invokes AWS CodeBuild in the build stage The developer wants to pass in a variable from CodePipelme so that the variable can be read in the CodeBuild buildspec yml file How can the developer accomplish this goal?

(A). Configure a unique CodePipeline variable namespace and variables as key-value pairs that define each of the variables required in CodeBuild

(B). Configure a CodePipeline environment variable that contains a JSON document that defines each of the variables required in CodeBuild

(C). Configure an AWS CloudFormation stack set that contains a JSON document that defines each of the variables required in CodeBuild Reference the stack set from

CodePipeline

(D). Configure an AWS CodeArtifact repository to store each environment variable Reference CodeArtifact from CodePipeline and CodeBuild

***Answer:*** A

https://docs.aws.amazon.com/codepipeline/latest/userguide/actions-variables.html

**QUESTION NO: 305**

Your application is trying to upload a 6 GB file to Simple Storage Service and receive a "Your proposed upload exceeds the maximum allowed object size." error message.

What is a possible solution for this?

(A). None, Simple Storage Service objects are limited to 5 GB

(B). Use the multi-part upload API for this object

(C). Use the large object upload API for this object

(D). Contact support to increase your object size limit

(E). Upload to a different region

***Answer:*** B Explanation https://docs.aws.amazon.com/AmazonS3/latest/dev/mpuoverview.html

**QUESTION NO: 306**

A developer implemented a static website hosted in Amazon S3 that makes web service requests hosted in Amazon API Gateway AWS Lambda. The site is showing an error that reads

"No ' Access-Control-Allow Origin' header is present on the requested resource Origin 'null' is therefore not allowed access " What should the developer do to resolve this issue?

(A). Enable cross-origin resource sharing (CORS) on the S3 bucket

(B). Enable cross-origin resource sharing (CORS) for the method in API Gateway

(C). Add the Access-Control-Request-Method header to the request

(D). Add the Access-Control-Request-Headers header to the request

***Answer:*** B

Explanation  
 https://docs.aws.amazon.com/apigateway/latest/developerguide/how-to-cors-console.html

**QUESTION NO: 307**

A Developer is designing a fault-tolerant environment where client sessions will be saved.

How can the Developer ensure that no sessions are lost if an Amazon EC2 instance fails?

(A). Use sticky sessions with an Elastic Load Balancer target group.

(B). Use Amazon SQS to save session data.

(C). Use Amazon DynamoDB to perform scalable session handling.

(D). Use Elastic Load Balancer connection draining to stop sending requests to failing instances.

***Answer:*** C   
DynamoDB would allow you to de-couple the instances from the session state storage. No one instance is then responsible for the session data, and even if all of them fail because of an outage, then any healthy instance can still retrieve the data from Dynamo. That makes the solution "fault-tolerant"

**QUESTION NO: 308**

What type of block cipher does Amazon S3 offer for server side encryption?

(A). Triple DES

(B). Advanced Encryption Standard (AES-256)

(C). Blowfish

(D). RC5

***Answer:*** B

https://aws.amazon.com/about-aws/whats-new/2011/10/04/amazon-s3-announces-server-side-encryption-support/#:~:text=Amazon%20S3%20Server%20Side%20Encryption%20uses%20one%20of%20the%20strongest,%2D%2D%20to%20encrypt%20your%20data.

**QUESTION NO: 309**

A developer is building an application. The application's front end is developed in JavaScript, and the data is stored in an Amazon DynamoDB table During testing, the application returns an HTTP 5xx error from the strongly consistent reads to the DynamoDB table; "Internal server error (Service: AmazonDynamoDBv2. Status Code: 500; Error Code; InternalServerError)."

Which actions should the developer take to mitigate this error? (Select TWO )

(A). Avoid strongly consistent reads

(B). Use DynamoDB Accelerator (DAX)

(C). Increase read/write capacity of DynamoDB to meet the peak load.

(D). Retry the failed read requests with exponential backoff

(E). Configure DynamoDB auto scaling

***Answer:*** A,D   
**https://aws.amazon.com/premiumsupport/knowledge-center/dynamodb-http-5xx-errors/**

**QUESTION NO: 310**

An application needs to use the IP address of the client in its processing. The application has been moved into AWS and has been placed behind an Application Load Balancer (ALB). However, all the client IP addresses now appear to be the same. The application must maintain the ability to scale horizontally.

Based on this scenario, what is the MOST cost-effective solution to this problem?

(A). Remove the application from the ALB. Delete the ALB and change Amazon Route 53 to direct traffic to the instance running the application.

(B). Remove the application from the ALB. Create a Classic Load Balancer in its place. Direct traffic to the application using the HTTP protocol.

(C). Alter the application code to inspect the X-Forwarded-For header. Ensure that the code can work properly if a list of IP addresses is passed in the header.

(D). Alter the application code to inspect a custom header. Alter the client code to pass the IP address in the custom header.

***Answer:*** C

https://docs.aws.amazon.com/elasticloadbalancing/latest/classic/x-forwarded-headers.html#x-forwarded-for

The X-Forwarded-For request header helps you identify the IP address of a client when you use an HTTP or HTTPS load balancer. Because load balancers intercept traffic between clients and servers, your server access logs contain only the IP address of the load balancer. To see the IP address of the client, use the X-Forwarded-For request header. Elastic Load Balancing stores the IP address of the client in the X-Forwarded-For request header and passes the header to your server

**QUESTION NO: 311**

A Developer has developed a web application and wants to deploy it quickly on a Tomcat server on AWS. The Developer wants to avoid having to manage the underlying infrastructure.

What is the easiest way to deploy the application, based on these requirements?

(A). AWS CloudFormation

(B). AWS Elastic Beanstalk

(C). Amazon S3

(D). AWS CodePipeline

***Answer:*** B

**QUESTION NO: 312**

A Development team has pushed out 10 applications running on several Amazon EC2 instances. The Operations team is asking for a graphical representation of one key performance metric for each application.

These metrics should be available on one screen for easy monitoring.

Which steps should the Developer take to accomplish this using Amazon CloudWatch?

(A). Create a custom namespace with a unique metric name for each application.

(B). Create a custom dimension with a unique metric name for each application.

(C). Create a custom event with a unique metric name for each application.

(D). Create a custom alarm with a unique metric name for each application.

***Answer:*** A   
"A namespace is a container for CloudWatch metrics. " https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/cloudwatch\_concepts.html

**QUESTION NO: 313**

A Developer is publishing critical log data to a log group in Amazon CloudWatch Logs, which was created 2 months ago. The Developer must encrypt the log data using an AWS KMS customer master key (CMK) so future data can be encrypted to comply with company's security policy. How can the Developer meet this requirement?

(A). Use the Cloud Watch Logs console and enable the encrypt feature on the log group.

(B). Use the AWS CLI create-log-group command and specify the key Amazon Resource

Name (ARN)

(C). Use the KMS console and associate the CMK with the log group

(D). Use the AWS CLI associate-Kms-key command and specify the key Amazon Resource Name (ARN)

***Answer:*** D

Check Step 3. https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/encrypt-log-data-kms.html

**QUESTION NO: 314**

A developer is creating AWS CloudFormation templates to manage an application's deployment in Amazon Elastic Container Service (Amazon ECS) through AWS CodeDeploy. The developer wants to automatically deploy new versions of the application to a percentage of users before the new version becomes available for all users. How should the developer manage the deployment of the new version?

(A). Modify the CloudFormation template to include a Transform section and the AWS "CodeDeploy::BlueGreen hook.

(B). Deploy the new version in a new CloudFormation stack After testing is complete, update the application's DNS records for the new stack.

(C). Run CloudFormation stack updates on the application stack to deploy new application versions when they are available.

(D). Create a nested stack for the new version. Include a Transform section and the AWS: CodeDeploy BlueGreen hook.

***Answer:*** A

To enable CloudFormation to perform blue/green deployments on a stack, include the following information in its stack template:

A Transform section in your template that invokes the AWS::CodeDeployBlueGreen transform and a Hook section that invokes the AWS::CodeDeploy::BlueGreen hook.

At least one of the ECS resources that will trigger a blue/green deployment if replaced during a stack update. Currently, those resources are AWS::ECS::TaskDefinition and AWS::ECS::TaskSet.

Source: https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/blue-green.html

**QUESTION NO: 315**

A Developer needs to deploy an application running on AWS Fargate using Amazon ECS.

The application has environment variables that must be passed to a container tor the application to initialize How should the environment variables be passed to the container?

(A). Define an array that includes the environment variables under the environment parameter within the service definition

(B). Define an array that includes the environment variables under the environment parameter within the task definition

(C). Define an array that includes the environment variables under the entrypoint parameter within the task definition

(D). Define in array that includes the environment variables under the entryPoint parameter within the service definition

***Answer:*** B

<https://docs.aws.amazon.com/AmazonECS/latest/userguide/taskdef-envfiles.html>

**QUESTION NO: 316**

A developer added a new feature to an application running on an Amazon EC2 instance that uses Amazon SQS After deployment, the developer noticed a significant increase in Amazon SQS costs. When monitoring the Amazon SQS metrics on Amazon CloudWatch. the developer found that on average one message per minute is posted on this queue.

What can be done to reduce Amazon SQS costs for this application?

(A). Increase the Amazon SQS queue polling timeout

(B). Scale down the Amazon SQS queue to the appropriate size for low traffic demand.

(C). Configure push delivery via Amazon SNS instead of polling the Amazon SQS queue

(D). Use an Amazon SQS first-in, first-out (FIFO) queue instead of a standard queue.

***Answer:*** A

**QUESTION NO: 317**

A Developer created a Lambda function for a web application backend. When testing the Lambda function from the AWS Lambda console, the Developer can see that the function is being executed, but there is no log data being generated in Amazon CloudWatch Logs, even after several minutes.

What could cause this situation?

(A). The Lambda function does not have any explicit log statements for the log data to send it to CloudWatch Logs.

(B). The Lambda function is missing CloudWatch Logs as a source trigger to send log data.

(C). The execution role for the Lambda function is missing permissions to write log data to the CloudWatch Logs.

(D). The Lambda function is missing a target CloudWatch Log group.

***Answer:*** C

Explanation https://docs.aws.amazon.com/lambda/latest/dg/lambda-monitoring.html

**QUESTION NO: 318**

An existing serverless application processes uploaded image files. The process currently uses a single Lambda function that takes an image file, performs the processing, and stores the file in Amazon S3. Users of the application now require thumbnail generation of the images. Users want to avoid any impact to the time it takes to perform the image uploads.

How can thumbnail generation be added to the application, meeting user requirements while minimizing changes to existing code?

(A). Change the existing Lambda function handling the uploads to create thumbnails at the time of upload.

Have the function store both the image and thumbnail in Amazon S3.

(B). Create a second Lambda function that handles thumbnail generation and storage.

Change the existing Lambda function to invoke it asynchronously.

(C). Create an S3 event notification with a Lambda function destination. Create a new Lambda function to generate and store thumbnails.

(D). Create an S3 event notification to an SQS Queue. Create a scheduled Lambda function that processes the queue, and generates and stores thumbnails.

***Answer:*** C

Explanation https://docs.aws.amazon.com/lambda/latest/dg/with-s3-example.html

**QUESTION NO: 319**

A developer supports an application that accesses data in an Amazon DynamoDB table One of the item attributes is expirationDate In the timestamp format The application uses this attribute to find items archive them and remove them from the table based on the timestamp value The application will be decommissioned soon, and the developer must find another way to implement this functionality The developer needs a solution that will require the least amount of code to write.

Which solution will meet these requirements?

(A). Enable TTL on the expirationDate attribute in the table. Create a DynamoDB stream. Create an AWS Lambda function to process the deleted items. Create a DynamoDB trigger for the Lambda function

(B). Create two AWS Lambda functions one to delete the items and one to process the items Create a DynamoDB stream Use the Deleteltem API operation to delete the items based on the expirationDate attribute Use the GetRecords API operation to get the items from the

DynamoDB stream and process them

(C). Create two AWS Lambda functions one to delete the items and one to process the items

Create an Amazon EventBridge (Amazon CloudWatch Events) scheduled rule to invoke the Lambda functions Use the Deleteltem API operation to delete the items based on the expirationDate attribute Use the GetRecords API operation to get the items from the

DynamoDB table and process them

(D). Enable TTL on the expirationDate attribute in the table Specify an Amazon Simple Queue Service (Amazon SQS) dead-letter queue as the target to delete the items Create an AWS Lambda function to process the items.

***Answer:*** C

**QUESTION NO: 320**

NA

**QUESTION NO: 321**

Which code snippet below returns the URL of a load balanced web site created in CloudFormation with an AWS::ElasticLoadBalancing::LoadBalancer resource name "ElasticLoad Balancer"?

(A). "Fn::Join" : ["". [ "http://", {"Fn::GetAtr" : [ "ElasticLoadBalancer","DNSName"]}]]

(B). "Fn::Join" : ["". [ "http://", {"Fn::GetAtr" : [ "ElasticLoadBalancer","Url"]}]]

(C). "Fn::Join" : ["". [ "http://", {"Ref" : "ElasticLoadBalancerUrl"}]]

(D). "Fn::Join" : [".", [ "http://", {"Ref" : "ElasticLoadBalancerDNSName"}]]

***Answer:*** A Explanation

https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/intrinsic-functionreference-getatt.html

**QUESTION NO: 322**

A developer has created a new AWS IAM user that has s3 putobject permission to write to a specific Amazon bucket. This S3 bucket uses server-side encryption with AWS KMS managed keys (SEE-KMS) as the encryption. Using the access key and secret key of the IAM user, the application received an access denied error when calling the PutObject API.

How can this issue be resolved?

(A). Update the policy of the IAM user to allow the s3 Encrypt action.

(B). Update the bucket policy of the S3 bucket to allow the IAM user to upload objects

(C). Update the policy of the IAM user to allow the kms GenerateDatakey action

(D). Update the ACL of the bucket to allow the IAM user to upload objects

***Answer:*** C

**QUESTION NO: 323**

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:*** A

**QUESTION NO: 324**

An AWS Lambda function generates a 3MB JSON file and then uploads it to an Amazon S3 bucket daily. The file contains sensitive information, so the Developer must ensure that it is encrypted before uploading to the bucket.

Which of the following modifications should the Developer make to ensure that the data is encrypted before uploading it to the bucket?

(A). Use the default AWS KMS customer master key for S3 in the Lambda function code.

(B). Use the S3 managed key and call the GenerateDataKey API to encrypt the file.

(C). Use the GenerateDateKey API, then use that data key to encrypt the file in the Lambda function code.

(D). Use a custom KMS customer master key created for S3 in the Lambda function code.

***Answer:*** C

**QUESTION NO: 325**

A Developer is creating an application that needs to locate the public IPv4 address of the Amazon EC2 instance on which it runs. How can the application locate this information?

(A). Get the instance metadata by retrieving http://169.254.169.254/latest/metadata/.

(B). Get the instance user data by retrieving http://169.254.169.254/latest/userdata/.

(C). Get the application to run IFCONFIG to get the public IP address.

(D). Get the application to run IPCONFIG to get the public IP address.

***Answer:*** A

**QUESTION NO: 326**

A social media company is using Amazon Cognito in order to synchronize profiles across different mobile devices, to enable end users to have a seamless experience.

Which of the following configurations can be used to silently notify users whenever an update is available on all other devices?

(A). Modify the user pool to include all the devices which keep them in sync.

(B). Use the SyncCallback interface to receive notifications on the application.

(C). Use an Amazon Cognito stream to analyze the data and push the notifications.

(D). Use the push synchronization feature with the appropriate IAM role.

***Answer:*** D

Explanation https://docs.aws.amazon.com/cognito/latest/developerguide/push-sync.html

**QUESTION NO: 327**

An organization is using Amazon API Gateway to provide a public API called "Survey" for collecting user feedback posts about its products The survey API has "DEV" and "PROD" stages and consists of one resource

"/feedback" which allows users to retrieve/create/update single feedback posts.

Aversion-controlled Swagger file is used to define a new API that retrieves multiple feedback posts To add the new API resource "/listFeedbackForProduct" the developer makes changes to the Swagger file defining an API uploads the fie to the organization's version control system, and uses the API Gateway Import API feature to apply the changes to the Survey API After successful import the developer runs the tests against the DEV stage and finds that resource VlistFeedbackForProduct" is not available.

What is MOST likely the reason for resource not being available?

(A). Even though the Swagger import was successful, resource creation failed afterwards

(B). There is a propagation delay of several minutes in creating API Gateway resources after import

(C). The developer needs to restart the API Gateway stage after import in order to apply the changes.

(D). The developer needs to create a new deployment after import in order to deploy the changes

***Answer:*** A

**QUESTION NO: 328**

What happens, by default, when one of the resources in a CloudFormation stack cannot be created?

(A). Previously-created resources are kept but the stack creation terminates.

(B). Previously-created resources are deleted and the stack creation terminates.

(C). The stack creation continues, and the final results indicate which steps failed. (D). CloudFormation templates are parsed in advance so stack creation is guaranteed to succeed.

***Answer:*** B Explanation

https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/stacks.html AWS CloudFormation ensures all stack resources are created or deleted as appropriate. Because AWS CloudFormation treats the stack resources as a single unit, they must all be created or deleted successfully for the stack to be created or deleted. If a resource cannot be created, AWS CloudFormation rolls the stack back and automatically deletes any resources that were created. If a resource cannot be deleted, any remaining resources are retained until the stack can be successfully deleted.

**QUESTION NO: 329**

NA

**QUESTION NO: 330**

A Developer is creating a mobile application that will not require users to log in.

What is the MOST efficient method to grant users access to AWS resources?

(A). Use an identity provider to securely authenticate with the application.

(B). Create an AWS Lambda function to create an IAM user when a user accesses the application.

(C). Create credentials using AWS KMS and apply these credentials to users when using the application.

(D). Use Amazon Cognito to associate unauthenticated users with an IAM role that has limited access to resources.

***Answer:*** D

Explanation https://docs.aws.amazon.com/cognito/latest/developerguide/iam-roles.html

**QUESTION NO: 331**

A developer implemented a static website hosted in amazon s3 that makes web service

requests in amazon api gateway and aws lambda. The site is showing an error that reads. ''No 'access control-allow-origin'header' header is present on the requested resource. Origin 'null is therefore not allowed access '' What should the developer do to resolve this issue?

(A). Enable cross-origin resource sharing (cors) on the s3 bucket

(B). Enable cross-origin resource sharing (cors) for the method in api gateway

(C). Add the access control-request-method header to the request

(D). Add the access-control inquest headers header to the request

***Answer:*** A

Reference: https://forums.aws.amazon.com/thread.jspa?threadid=252972

**QUESTION NO: 332**

A company stores all personally identifiable information (PII) in an Amazon DynamoDB table named PII in Account A.

An application running on Amazon EC2 instances in Account B requires access to the PII table.

An administrators in Account A created an IAM role named AccessPII with privileges to access the PII table, and made account B a trusted entity.

Which combination of actional steps should Developers take to access the table? (Select TWO )

(A). Ask an Administrator in Account B to allow the EC2 IAM role permission to assume the

AccessPII role

(B). Ask an Administrator in Account B to allow the EC2 IAM role permission to assume the

AccessPll role with predefined service control policies

(C). Ask an Administrator in Account A to allow the EG2 IAM role permission to assume the AccessPII role with predefined service control policies.

(D). Include the AssumeRole API in the application code logic to obtain credentials to access the PlI table

(E). Include the GetSession token API in the application code logic to obtain credentials to access the Pll table

***Answer:*** B,E

**QUESTION NO: 333**

Developer is creating an AWS Lambda function to process a stream of data from an Amazon Kinesis Data Stream. When the Lambda function parses the data and encounters a missing field, it exits the function with an error. The function is generating duplicate records from the Kinesis stream. When the Developer looks at the stream output without the Lambda function, there are no duplicate records. What is the reason for the duplicates?

(A). The Lambda function did not advance the Kinesis stream pointer to the next record after the error.

(B). The Lambda event source used asynchronous invocation, resulting in duplicate records. (C). The Lambda function did not handle the error, and the Lambda service attempted to reprocess the data.

(D). The Lambda function is not keeping up with the amount of data coming from the stream.

***Answer*** :C

Explanation https://docs.aws.amazon.com/lambda/latest/dg/with-kinesis.html

**QUESTION NO: 334**

A company needs to secure its existing website running behind an Elastic Load Balancer.

The website's Amazon EC2 instances are CPU-constrained.

What should be done to secure the website while not increasing the CPU load on the EC2 web servers? (Select TWO.)

(A). Configure an Elastic Load Balancer with SSL pass-through.

(B). Configure SSL certificates on an Elastic Load Balancer.

(C). Configure an Elastic Load Balancer with a Loadable Storage System.

(D). Install SSL certificates on the EC2 instances.

(E). Configure an Elastic Load Balancer with SSL termination.

***Answer:*** B,E

**QUESTION NO: 335**

A developer is provided with an HTTPS clone URL for an AWS CodeCommit repository.

What needs to be configured before cloning this repository?

(A). Use AWS KMS to set up public and private keys for use with CodeCommit.

(B). Set up the Git credential helper to use an AWS credential profile, and enable the helper to send the path to the repositories.

(C). Generate encryption keys using AWS CloudHSM, then export the key for use with AWS CodeCommit.

(D). Use AWS certificate manager to provision public and private SSL/TLS certificates.

***Answer:*** B

Explanation

AWS credential profile, and enabling the Git credential helper to send the path to repositories:

Reference: https://docs.aws.amazon.com/codecommit/latest/userguide/setting-up-httpsunixes.html

**QUESTION NO: 336**

NA

**QUESTION NO: 337**

A developer has written an Amazon kinesis Data streams application. As usage grows and traffic over time, the application is regularly receiving provisionedThroughputExceededException error messages.

Which steps should the Developer take to resolve the error? (Select Two.) (A). Use Auto scaling to scale the stream for better performance.

(B). Increase the delay between the GetRecords call and the PutRecords call.

(C). Increase the number of shards in the data stream.

(D). Specify a shard iterator using the shardlterator parameter.

(E). Implement exponential backoff on the GetRecords call and the PutRecords call.

***Answer:*** B,D

Reference: https://docs.aws.amazon.com/streams/latest/dev/troubleshooting-consumers.html

**QUESTION NO: 338**

How should custom libraries be utilized in AWS Lambda?

(A). Host the library on Amazon S3 and reference to it from the Lambda function.

(B). Install the library locally and upload a ZIP file of the Lambda function.

(C). Import the necessary Lambda blueprint when creating the function. (D). Modify the function runtime to include the necessary library.

***Answer:*** D

Reference: https://docs.aws.amazon.com/lambda/latest/dg/env\_variables.html

**QUESTION NO: 339**

A developer is designing a distributed application built using a microservices architect spanning multiple AWS accounts. The company's operations team wants to analyze and debug application issues from a centralized account.

How can the developer meet these requirements?

(A). Use an Amazon X-Ray agent with role assumption on to publish data into the centralized account.

(B). Use Amazon X-Ray and create a new IAM user to publish the access keys into the centralized account.

(C). Use VPC Flow Logs to collect application logs across different accounts.

(D). Enable AWS CloudTrail to publish the trails in an Amazon S3 bucket in the centralized account.

***Answer:*** A

**QUESTION NO: 340**

What AWS products and features can be deployed by Elastic Beanstalk? Choose 3

Answers

(A). Auto scaling groups

(B). Route 53 hosted zones

(C). Elastic Load Balancers

(D). RDS Instances

(E). Elastic IP addresses

(F). SQS Queues

A,C,D

Explanation

https://aws.amazon.com/elasticbeanstalk/faqs/

Q: What are the Cloud resources powering my AWS Elastic Beanstalk application? AWS

Elastic Beanstalk uses proven AWS features and services, such as Amazon EC2, Amazon RDS, Elastic Load Balancing, Auto Scaling, Amazon S3, and Amazon SNS, to create an environment that runs your application. The current version of AWS Elastic Beanstalk uses the Amazon Linux AMI or the Windows Server 2012 R2 AMI.

**QUESTION NO: 341**

A developer is trying to monitor an application's status by running a cron job that returns 1 if the service is up and 0 if the service is down. The developer created code that uses an AWS CLI put-metric-alarm command to publish the custom metrics to Amazon CloudWatch and create an alarm However the developer is unable to create an alarm as the custom metrics do not appear m the CloudWatch console.

What is causing this issue?

(A). Sending custom metrics using the CLI is not supported

(B). The developer needs to use the put-metric-data command.

(C). The developer must use a unified CloudWatch agent to publish custom metrics (D). The code is not running on an Amazon EC2 instance

***Answer:*** B

**QUESTION NO: 342**

A developer has written an application hosted on Amazon EC2 instances. The application generates and uploads thousands of new objects to an Amazon S3 bucket located in the same AWS region. The size of each object is less than 1 MB. The application is taking too long to run.

How can the performance of the application be improved?

(A). Use the S3 Multipart Upload API

(B). Use S3 Transfer Acceleration

(C). Upload the objects in parallel to Amazon S3

(D). Add a random prefix to the object keys

***Answer:*** D

**QUESTION NO: 343**

A Developer is writing an imaging micro service on AWS Lambda. The service is dependent on several libraries that are not available in the Lambda runtime environment.

Which strategy should the Developer follow to create the Lambda deployment package?

(A). Create a ZIP file with the source code and all dependent libraries.

(B). Create a ZIP file with the source code and a script that installs the dependent libraries at runtime.

(C). Create a ZIP file with the source code. Stage the dependent libraries on an Amazon S3 bucket indicated by the Lambda environment variable LD\_LIBRARY\_PATH

(D). Create a ZIP file with the source code and a buildspec.yaml file that installs the dependent libraries on AWS Lambda. B

**QUESTION NO: 344**

A Developer wants to use AWS X-Ray to trace a user request end-to-end throughput the software stack. The Developer made the necessary changes in the application tested it, and found that the application is able to send the traces to AWS X-Ray. However, when the application is deployed to an EC2 instance, the traces are not available.

Which of the following could create this situation? (Select two.)

(A). The traces are reaching X-Ray, but the Developer does not have access to view the records.

(B). The X-Ray daemon is not installed on the EC2 instance.

(C). The X-Ray endpoint specified in the application configuration is incorrect.

(D). The instance role does not have "xray:BatchGetTraces" and "xray:GetTraceGraph" permissions.

(E). The instance role does not have "xray:PutTraceSegments" and "xray:PutTelemetryRecords" permissions.

***Answer:*** B,E

**QUESTION NO: 345**

Which of the following statements about SQS is true?

(A). Messages will be delivered exactly once and messages will be delivered in First in, First out order

(B). Messages will be delivered exactly once and message delivery order is indeterminate

(C). Messages will be delivered one or more times and messages will be delivered in First in,

First out order

(D). Messages will be delivered one or more times and message delivery order is indeterminate

***Answer:*** D

Explanation https://aws.amazon.com/sqs/features/

**QUESTION NO: 346**

A company is creating an application that will require users to access AWS services and allow them to reset their own passwords.

Which of the following would allow the company to manage users and authorization while allowing users to reset their own passwords?

(A). Amazon Cognito identify pools and AWS STS

(B). Amazon Cognito identity pools and AWS IAM

(C). Amazon Cognito user pools and AWS KMS

(D). Amazon Cognito user pools and identity pools

***Answer:*** D

Explanation https://serverless-stack.com/chapters/cognito-user-pool-vs-identity-pool.html

User Pool for authentication Identity Pool for access to AWS resources

**QUESTION NO: 347**

A development team uses AWS Elastic Beanstalk for application deployment. The team has configured the application version lifecycle policy to limit the number of application versions to 25 However even with the lifecycle policy the source bundle is deleted from the Amazon S3 source bucket What should a developer do in the Elastic Beanstalk application version lifecycle settings to retain the source code in the S3 bucket?

(A). Change the Set the application versions limit by total count setting to zero.

(B). Disable the Lifecycle policy setting

(C). Change the Set the application version limit by age setting to zero. (D). Set Retention to Retain source bundle in S3.

***Answer:*** C

**QUESTION NO: 348**

Which of the following programming languages have an officially supported AWS SDK?

Choose 2

Answers

(A). Perl

(B). PHP

(C). Pascal

(D). Java (E). SQL

***Answer:*** B,D

**QUESTION NO: 349**

A company process incoming documents from an Amazon S3 bucket. Users upload documents to an S3 bucket using a web user interface. Upon receiving files in S3, and AWS Lambda function is invoked to process the files, but the Lambda function times out intermittently.

If the Lambda function is configured with the default settings, what will happen to the S3 event when there is a timeout exception?

(A). Notification of a failed S3 event is sent as an email through Amazon SNS.

(B). The S3 event is sent to the default Deed Letter Queue.

(C). The S3 event is processed unit it is successful.

(D). The S3 event is discarded after the event is retried twice.

***Answer:*** D

**QUESTION NO: 350**

NA

**QUESTION NO: 351**

What does an Amazon SQS delay queue accomplish?

(A). Messages are hidden for a configurable amount of time when they are first added to the queue.

(B). Messages are hidden for a configurable amount of time after they are consumed from the queue.

(C). The consumer can poll the queue for a configurable amount of time before retrieving a message.

(D). Message cannot be deleted for a configurable amount of time after they are consumed from the queue.

***Answer:*** A

Reference: https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqsdelayqueues.html

**QUESTION NO: 352**

n on-premises application makes repeated calls to store files to Amazon S3. As usage of the application has increased, "LimitExceeded" errors are being logged.

What should be changed to fix this error?

(A). Implement exponential backoffs in the application.

(B). Load balance the application to multiple servers.

(C). Move the application to Amazon EC2.

(D). Add a one second delay to each API call.

***Answer:*** A

https://docs.aws.amazon.com/AWSEC2/latest/APIReference/query-api-troubleshooting.html

**QUESTION NO: 353**

A Developer is building a mobile application and needs any update to user profile data to be pushed to all devices accessing the specific identity. The Developer does not want to manage a back end to maintain the user profile data.

What is the MOST efficient way for the Developer to achieve these requirements using Amazon Cognito?

(A). Use Cognito federated identities.

(B). Use a Cognito user pool.

(C). Use Cognito Sync.

(D). Use Cognito events.

***Answer:*** C

Explanation

Amazon Cognito Sync is an AWS service and client library that enables cross-device syncing of application-related user data. You can use it to synchronize user profile data across mobile devices and the web without requiring your own backend. https://docs.aws.amazon.com/cognito/latest/developerguide/cognito-sync.html

**QUESTION NO: 354**

An application uses Amazon Kinesis Data Streams to ingest and process large streams of data records in real time. Amazon EC2 instances consume and process the data from the shards of the Kinesis data stream by using Amazon Kinesis Client Library (KCL). The application handles the failure scenarios and does not require standby workers. The application reports that a specific shard is receiving more data than expected. To adapt to the chnages in the rate of data flow, the "hot" shard is resharded.

Assuming that the initial number of shards in the Kinesis data stream is 4, and after resharding the number of shards increased to 6, what is the maximum number of EC2 instances that can be deployed to process data from all the shards?

(A). 12

(B). 6

(C). 4

(D). 1

***Answer:*** B

Explanation

Typically, when you use the KCL, you should ensure that the number of instances does not exceed the number of shards (except for failure standby purposes). Each shard is processed by exactly one KCL worker and has exactly one corresponding record processor, so you never need multiple instances to process one shard.

However, one worker can process any number of shards, so it's fine if the number of shards exceeds the number of instances. https://docs.aws.amazon.com/streams/latest/dev/kinesisrecord-processor-scaling.html

**QUESTION NO: 355**

A company maintains an application responsible for processing several thousand external callbacks each day.

The company's System administrators want to know how many callbacks are being received on a rolling basis, and they want this data available for 10 days. The company also wants the ability to issue automated alerts if the number of callbacks exceeds the defined thresholds. What is the MOST cost-effective way to address the need to track and alert on these statistics?

(A). Push callback data to an Amazon RDS database that can be queried to show historical data and to alert on exceeded thresholds.

(B). Push callback data to AWS X-Ray and use AWS Lambda to query, display, and alert on exceeded thresholds.

(C). Push callback data to Amazon Kinesis Data Streams and invoke an AWS Lambda function that stores data in Amazon DynamoDB and sends the required alerts.

(D). Push callback data to Amazon CloudWatch as a custom metric and use the CloudWatch alerting mechanisms to alert System Administrators.

***Answer:*** D

https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/publishingMetrics.html

**QUESTION NO: 356**

A company needs a version control system for collaborative software development. Features of the system must include the following:

* Support for batches of changes across multiple files
* Parallel branching
* Version tracking

Which AWS service will meet these requirements?

(A). AWS CodePipeline

(B). Amazon S3

(C). AWS Code Build

(D). AWS CodeCommit

***Answer:*** D

Explanation https://docs.aws.amazon.com/codecommit/latest/userguide/welcome.html

**QUESTION NO: 357**

You are providing AWS consulting services for a company developing a new mobile application that will be leveraging Amazon SNS Mobile Push for push notifications. In order to send direct notification messages to individual devices each device registration identifier or token needs to be registered with SNS; however the developers are not sure of the best way to do this.

You advise them to:

(A). Bulk upload the device tokens contained in a CSV file via the AWS Management Console.

(B). Let the push notification service (e.g. Amazon Device Messaging) handle the registration.

(C). Implement a token vending service to handle the registration.

(D). Call the CreatePlatformEndPoint API function to register multiple device tokens.

***Answer:*** D

Explanation https://docs.aws.amazon.com/sns/latest/dg/mobile-push-send-devicetoken.html

**QUESTION NO: 358**

A developer is planning to use an Amazon API Gateway and AWS Lambda to provide a REST API The developer will have three distinct environments to manage development, test, and production. How should the application be deployed while minimizing the number of resources to manage?

(A). Create a separate API Gateway and separate Lambda function for each environment in the same Region

(B). Assign a Region for each environment and deploy API Gateway and Lambda to each

Region

(C). Create one API Gateway with multiple stages with one Lambda function with multiple aliases.

(D). Create one API Gateway and one Lambda function, and use a REST parameter to identify tne environment.

***Answer:*** C

https://aws.amazon.com/blogs/compute/using-api-gateway-stage-variables-to-manage-lambda-functions/

**QUESTION NO: 359**

A company is using Amazon API Gateway to manage access to a set of microservices implemented as AWS Lambda functions. Following a bug report, the company makes a minor breaking change to one of the APIs.

In order to avoid impacting existing clients when the new API is deployed, the company wants to allow clients six months to migrate from v1 to v2.

Which approach should the Developer use to handle this change?

(A). Update the underlying Lambda function and provide clients with the new Lambda invocation URL.

(B). Use API Gateway to automatically propagate the change to clients, specifying 180 days in the phased deployment parameter.

(C). Use API Gateway to deploy a new stage named v2 to the API and provide users with its URL.

(D). Update the underlying Lambda function, create an Amazon CloudFront distribution with the updated Lambda function as its origin.

***Answer:*** C

https://docs.aws.amazon.com/apigateway/latest/developerguide/stages.html

**QUESTION NO: 360**

NA

**QUESTION NO: 361**

A developer is building an application using an Amazon API Gateway REST API backed by an AWS Lambda function that interacts with an Amazon DynamoDB table During testing, the developer observes high latency when making requests to the API How can the developer evaluate the end-to-end latency and identify performance bottlenecks?

(A). Enable AWS CloudTrail logging and use the logs to map each latency and bottleneck

(B). Enable and configure AWS X-Ray tracing on API Gateway and the Lambda function Use X-Ray to trace and analyze user requests

(C). Enable Amazon CloudWatch Logs for the Lambda function Enable execution logs for API Gateway to view and analyze user request logs.

(D). Enable VPC Flow Logs to capture and analyze network traffic within the VPC

***Answer:*** B

https://docs.aws.amazon.com/apigateway/latest/developerguide/apigateway-xray.html

**QUESTION NO: 362**

A development team is migrating a monolithic application to Amazon API Gateway with AWS Lambda integrations using the AWS CD The zip deployment package exceeds the Lambda direct upload deployment package size limit. How should the Lambda function be deployed? (A). Use the zip tile to create a Lambda layer and reference it using the -code CLI parameter (B). Create a Docker image and reference the image using the --docker-image CLI paramete r

(C). Upload a deployment package using the --zp-file CLI parameter

(D). Upload a deployment package package and upload the .zip file to Amazon S3 and reference Amazon S3 using the --code CLI parameter

***Answer:*** D

https://docs.aws.amazon.com/lambda/latest/dg/gettingstarted-package.html

**QUESTION NO: 363**

Where can PortMapping be defined when launching containers in Amazon ECS?

(A). Security groups

(B). Amazon Elastic Container Registry (Amzon ECR)

(C). Container agent

(D). Task definition

***Answer:*** D

https://docs.aws.amazon.com/AmazonECS/latest/userguide/task\_definition\_parameters.html

**QUESTION NO: 364**

An application is using a custom library to make HTTP calls directly to AWS service endpoints. The application is experiencing transient errors that are causing processes to stop when each error is first encountered A request has been made to make the application more resilient by adding error retries and exponential backoff.

How should a developer implement the changes with MINIMAL custom code?

(A). Add a Retry-After HTTP header to API requests.

(B). Use the AWS CLI to configure the retry settings in a named profile (C). Change the custom library to retry on 5xx errors only

(D). Use an AWS SDK and set retry-specific configurations.

***Answer:*** D

https://docs.aws.amazon.com/general/latest/gr/api-retries.html

**QUESTION NO: 365**

You have written an application that uses the Elastic Load Balancing service to spread traffic to several web servers. Your users complain that they are sometimes forced to login again in the middle of using your application, after they have already logged in. This is not behavior you have designed.

What is a possible solution to prevent this happening?

(A). Use instance memory to save session state.

(B). Use instance storage to save session state.

(C). Use EBS to save session state

(D). Use ElastiCache to save session state. (E). Use Glacier to save session slate.

***Answer:*** D

Explanation https://aws.amazon.com/caching/session-management/

**QUESTION NO: 366**

An application is running on an EC2 instance. The Developer wants to store an application metric in Amazon CloudWatch.

What is the best practice for implementing this requirement?

(A). Use the PUT Object API call to send data to an S3 bucket. Use an event notification to invoke a Lambda function to publish data to CloudWatch.

(B). Publish the metric data to an Amazon Kinesis Stream using a PutRecord API call.

Subscribe a Lambda function that publishes data to CloudWatch.

(C). Use the CloudWatch PutMetricData API call to submit a custom metric to CloudWatch. Provide the required credentials to enable the API call.

(D). Use the CloudWatch PutMetricData API call to submit a custom metric to CloudWatch. Launch the EC2 instance with the required IAM role to enable the API call.

***Answer:*** D

Explanation https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_roles\_use\_switch-role-ec2.html

**QUESTION NO: 367**

A team of Developers must migrate an application running inside an AWS Elastic Beanstalk environment from a Classic Load Balancer to an Application Load Balancer.

Which steps should be taken to accomplish the task using the AWS Management Console?

(A). 1. Update the application code in the existing deployment.

1. Select a new load balancer type before running the deployment.
2. Deploy the new version of the application code to the environment.

(B). 1. Create a new environment with the same configurations except for the load balancer type.

1. Deploy the same application version as used in the original environment.
2. Run the swap-environment-cnames action.

(C). 1. Clone the existing environment, changing the associated load balancer type.

1. Deploy the same application version as used in the original environment.
2. Run the swap-environment-cnames action.

(D). 1. Edit the environment definitions in the existing deployment.

1. Change the associated load balancer type according to the requirements.
2. Rebuild the environment with the new load balancer type.

***Answer:*** B Explanation

https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/using-features.managing.elb.html By default, Elastic Beanstalk creates an Application Load Balancer for your environment when you enable load balancing with the Elastic Beanstalk console or the EB CLI. It configures the load balancer to listen for HTTP traffic on port 80 and forward this traffic to instances on the same port. You can choose the type of load balancer that your environment uses only during environment creation. Later, you can change settings to manage the behavior of your running environment's load balancer, but you can't change its type.

**QUESTION NO: 368**

A developer registered an AWS Lambda function as a target for an Application Load Balancer (ALB) using a CLI command. However, the Lambda function is not being invoked when the client sends requests through the ALB.

Why is the Lambda function not being invoked?

(A). A Lambda function cannot be registered as a target for an ALB

(B). A Lambda function can be registered with an ALB using AWS Management Console only

(C). The permissions to invoke the Lambda function are missing

(D). Cross-zone is not enabled on the ALB

***Answer:*** C

Reference: https://docs.aws.amazon.com/elasticloadbalancing/latest/application/lambdafunctions.html

**QUESTION NO: 369**

An application stores payroll information nightly in DynamoDB for a large number of employees across hundreds of offices. Item attributes consist of individual name, office identifier, and cumulative daily hours.

Managers run reports for ranges of names working in their office. One query is. "Return all Items in this office for names starting with A through E".

Which table configuration will result in the lowest impact on provisioned throughput for this query?

(A). Configure the table to have a hash index on the name attribute, and a range index on the office identifier

(B). Configure the table to have a range index on the name attribute, and a hash index on the office identifier

(C). Configure a hash index on the name attribute and no range index

(D). Configure a hash index on the office Identifier attribute and no range index

***Answer:*** B Explanation

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.CoreCo mponents.html Partition key and sort key - Referred to as a composite primary key, this type of key is composed of two attributes. The first attribute is the partition key, and the second attribute is the sort key. DynamoDB uses the partition key value as input to an internal hash function. The output from the hash function determines the partition (physical storage internal to DynamoDB) in which the item will be stored. All items with the same partition key value are stored together, in sorted order by sort key value.

**QUESTION NO:370**

NA

**QUESTION NO: 371**

A Developer is building a web application that uses Amazon API Gateway to expose an AWS Lambda function to process requests from clients. During testing, the Developer notices that the API Gateway times out even though the Lambda function finishes under the set time limit. Which of the following API Gateway metrics in Amazon CloudWatch can help the Developer troubleshoot the issue? (Choose two.)

(A). CacheHitCount

(B). IntegrationLatency

(C). CacheMissCount

(D). Latency (E). Count

***Answer:*** B,C Explanation

https://docs.aws.amazon.com/apigateway/latest/developerguide/api-gateway-metrics-anddimensions.html

**QUESTION NO: 372**

A developer has written an application that writes data to Amazon DynamoDB- The DynamoDB table has been configured to use conditional writes During peak usage times, writes are failing due to a CondittonatCheckFailedException error How can the developer increase the application's reliability when multiple clients are attempting to write to the same record?

(A). Write the data to an Amazon SNS topic.

(B). Increase the amount of write capacity for the table to anticipate short-term spikes or bursts m write operations

(C). Implement a caching solution, such as DynamoDB Accelerator or Amazon ElastiCache. (D). Implement error retries and exponential backoff with jitter.

***Answer:*** D

https://aws.amazon.com/premiumsupport/knowledge-center/dynamodb-table-throttled/

**QUESTION NO: 373**

A developer has written an application that runs on Amazon EC2 instances. The developer is adding functionality for the application to write objects to an Amazon S3 bucket Which policy must the developer modify to allow the instances to write these objects?

(A). The 1AM policy that is attached to the EC2 instance profile role

(B). The session policy that is applied to the EC2 instance role session

(C). The AWS Key Management Service (AWS KMS) key policy that is attached to the EC2 instance profile role.

(D). The Amazon VPC endpoint policy

***Answer:*** C

https://docs.aws.amazon.com/AmazonS3/latest/userguide/optimizing-performance.html

**QUESTION NO: 374**

What are the steps to using the AWS CLI to launch a templatized serverless application?

(A). Use AWS CloudFormation get-template then CloudFormation execute-change-set.

(B). Use AWS CloudFormation validate-template then CloudFormation create-change-set.

(C). Use AWS CloudFormation package then CloudFormation deploy.

(D). Use AWS CloudFormation create-stack then CloudFormation update-stack.

***Answer:*** C

Explanation https://docs.aws.amazon.com/cli/latest/reference/cloudformation/package.html

**QUESTION NO: 375**

A developer is writing an AWS Lambda function. The developer wants to log key events that occur during the Lambda function and include a unique identifier to associate the events with a specific function invocation Which of the following will help the developer accomplish this objective?

(A). Obtain the request identifier from the Lambda context object Architect the application to write logs to the console.

(B). Obtain the request identifier from the Lambda event object Architect the application to write logs to a file

(C). Obtain the request identifier from the Lambda event object Architect the application to write logs to the console

(D). Obtain the request identifier from the Lambda context object Architect the application to write logs to a file.

***Answer:*** A

https://aws.amazon.com/blogs/compute/techniques-and-tools-for-better-serverless-api-logging-with-amazon-api-gateway-and-aws-lambda/

QUESTION NO:376

A development team uses AWS Elastic Beanstalk to deploy a Java-based web application. The team wants to ensure that the changes to the source code and the configuration are always deployed on new instances The team configures the Elastic Beanstalk environment to use immutable updates. However an error occurs the first time a change is deployed with the new update policy What is the MOST likely cause of this issue?

(A). Immutable updates are not supported for Java-based applications

(B). The account has reached its on-demand instance limit

(C). Immutable updates are only supported for m4 large and larger instance types. (D). The developer must also modify the ebextensions/immutable-updates config file to enable immutable updates

***Answer:*** A

**QUESTION NO: 377**

A developer needs to modify an application architecture to meet new functional requirements. Application data is stored in Amazon DynamoDB and processed for analysis in a rightly batch. The system analysts do not want to wait unit the next day to view the processed data and have asked to have it available in near-real time.

Which application architect pattern would enables the data to be processed as it is received?

(A). Evert driven

(B). Client served driven

(C). Fan-out driven

(D). Schedule driven

***Answer:*** A

QUESTION NO: **378**

A company is using AWS CodePipeline to deliver one of its applications. The delivery pipeline is triggered by changes to the master branch of an AWS CodeCommit repository and uses AWS CodeBuild to implement the test and build stages of the process and AWS CodeDeploy to deploy the application.

The pipeline has been operating successfully for several months and there have been no modifications.

Following a recent change to the application's source code, AWS CodeDeploy has not deployed the updates application as expected.

What are the possible causes? (Choose two.)

(A). The change was not made in the master branch of the AWS CodeCommit repository.

(B). One of the earlier stages in the pipeline failed and the pipeline has terminated. (C). One of the Amazon EC2 instances in the company's AWS CodePipeline cluster is inactive.

(D). The AWS CodePipeline is incorrectly configured and is not executing AWS CodeDeploy. (E). AWS CodePipeline does not have permissions to access AWS CodeCommit.

***Answer:*** A,B

**QUESTION NO: 379**

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.

***Answer:*** ~~C~~  
A

Reference:https://docs.aws.amazon.com/aws-technical-content/latest/microservices-onaws/microservices-on-aw

**QUESTION NO: 380**

NA

**QUESTION NO: 381**

An application is real-time processing millions of events that are received through an API. What service could be used to allow multiple consumers to process the data concurrently and MOST cost-effectively?

(A). Amazon SNS with fanout to an SQS queue for each application

(B). Amazon SNS with fanout to an SQS FIFO (first-in, firtst-out) queue for each application

(C). Amazon Kinesis Firehouse

(D). Amazon Kinesis Streams

***Answer:*** D

**QUESTION NO: 382**

A developer creates an Amazon S3 bucket to store project status files that are uploaded hourly The developer also creates an AWS Lambda function'that will be used to process the project status files What should the developer do to invoke the function with the LEAST amount of AWS infrastructure?

(A). Create an Amazon EventBndge (Amazon CloudWatch Events) rule to invoke the function every 5 minutes and scan for new objects

(B). Create an S3 event notification to invoke the function when a new object is created in the

S3 bucket

(C). Create an S3 event notification that publishes a message to an Amazon Simple Notification Service (Amazon SNS) topic Subscribe the function to the SNS topic.

(D). Create an S3 event notification that adds a message to an Amazon Simple Queue Service (Amazon SQS) queue. Configure the function to poll the queue

***Answer:*** B

**QUESTION NO: 383**

A stock market monitoring application uses Amazon Kinesis for data ingestion. During simulated tests of peak data rates, the Kinesis stream cannot keep up with the incoming data.

What step will allow Kinesis to accommodate the traffic during peak hours?

(A). Install the Kinesis Producer Library (KPL) for ingesting data into the stream. (B). Reduce the data retention period to allow for more data ingestion using DecreaseStreamRetentionPeriod.

(C). Increase the shard count of the stream using UpdateShardCount.

(D). Ingest multiple records into the stream in a single call using PutRecords.

***Answer:*** C

Explanation https://docs.aws.amazon.com/streams/latest/dev/developing-producers-with-kpl.html

**QUESTION NO: 384**

An organization must store thousands of sensitive audio and video files in an Amazon S3 bucket.

Organizational security policies require that all data written to this bucket be encrypted.

How can compliance with this policy be ensured?

(A). Use AWS Lambda to send notifications to the security team if unencrypted objects are pun in the bucket.

(B). Configure an Amazon S3 bucket policy to prevent the upload of objects that do not contain the x-amzserver-side-encryption header.

(C). Create an Amazon CloudWatch event rule to verify that all objects stored in the Amazon S3 bucket are encrypted.

(D). Configure an Amazon S3 bucket policy to prevent the upload of objects that contain the x-amz-server-sideencryption header.

***Answer:*** B

**QUESTION NO: 385**

A company has a three-tier application that is deployed in Amazon Elastic Container Service (Amazon ECS) The application is using an Amazon RD$ for MySQL DB instance The application performs more database reads than writes.

During times of peak usage, the application's performance degrades When this performance degradation occurs, the DB instance's ReadLatency metric in Amazon CloudWatch increases suddenly How should a developer modify the application to improve performance?

(A). Use Amazon ElastiCache to cache query results

(B). Scale the ECS cluster to contain more ECS instances

(C). Add read capacity units (RCUs) to the DB instance

(D). Modify the ECS task definition to increase the task memory

***Answer:*** A

**QUESTION NO: 386**

A developer used the BalehWnteltern API operation to insert items in an Amazon DynamoDB table OynamoDB returned a few items as unprocessed due to throttling The developer decides to retry the records on the unprocessed items What should the developer do to reprocess the records with the LEAST number of API calls'?

(A). Retry the BatchWriteltem operation immediately

(B). Perform the Putltem operation on the unprocessed items individually instead of using the BatchWriteltem operation

(C). Delay the BatchWriteltem operation by using progressively longer wait times between retries, or exponential backoff

(D). Delete the items that were successfully processed, and reissue a new BatchWriteltem operation

***Answer:*** D

**QUESTION NO: 387**

A developer has code stored in an Amazon S3 bucket The code must be deployed as an

AWS Lambda function across multiple accounts in the same Region as the S3 bucket The Lambda function will be deployed using an AWS CloudFormation template that is run for each account What is the MOST secure approach to allow access to the Lambda code in the S3 bucket?

(A). Grant the CloudFormation execution role S3 list and get permissions Add a bucket policy to Amazon S3 with the Pnncipal of "AWS": [account numbers].

(B). Grant the CloudFormation execution role S3 get permissions Add a bucket policy to Amazon S3 with the Principal of "".

(C). Use a service-based link to grant the Lambda function S3 list and get permissions by explicitly adding the S3 bucket's account number in the resource

(D). Use a service-based link to grant the Lambda function S3 get permissions and add a Resource of "\*" to allow access to the S3 bucket.

***Answer:*** A

**QUESTION NO: 388**

\A development team is using AWS Elastic Beanstalk to deploy a two-tier application that consists of a load-balanced web tier and an Amazon RDS database tier in production. The team would like to separate the RDS instance from the Elastic Beanstalk.

How can this be accomplished?

(A). Use the Elastic Beanstalk CLI to disassociate the database.

(B). Use the AWS CLI to disassociate the database.

(C). Change the deployment policy to disassociate the database.

(D). Recreate a new Elastic Beanstalk environment without Amazon RDS.

***Answer:*** D

Explanation https://aws.amazon.com/premiumsupport/knowledge-center/decouple-rds-from-beanstalk/

**QUESTION NO: 389**

A Developer is writing a REST service that will add items to a shopping list. The service is built on Amazon API Gateway with AWS Lambda integrations. The shopping list items are send as query string parameters in the method request.

How should the Developer convert the query string parameters to arguments for the Lambda function?

(A). Enable request validation

(B). Include the Amazon Resource Name (ARN) of the Lambda function

(C). Change the integration type

(D). Create a mapping template

***Answer:*** D

Explanation

https://docs.aws.amazon.com/apigateway/latest/developerguide/integrating-api-with-awsservices-lambda.html#a

**QUESTION NO: 390**

NA

**QUESTION NO: 391**

A developer must ensure that the IAM credentials used by an application in Amazon EC2 are not misused or compromised What should the developer use to keep user credentials secure?

(A). Environment variables

(B). AWS credentials file

(C). Instance profile credentials

(D). Command line options

***Answer:*** C

**QUESTION NO: 392**

A developer must modify an Alexa skill backed by an AWS Lambda function to access an Amazon DynamoDB table in a second account A role in the second account has been created with permissions to access the table How should the table be accessed?

(A). Modify the Lambda function execution role's permissions to include the new role

(B). Change the Lambda function execution role to be the new role

(C). Assume the new role in the Lambda function when accessing the table

(D). Store the access key and the secret key for the new role and use them when accessing the table

***Answer:*** ~~A~~ ,C

**QUESTION NO: 393**

A legacy service has an XML-based SOAP interface. The Developer wants to expose the functionality of the service to external clients with the Amazon API Gateway. Which technique will accomplish this?

(A). Create a RESTful API with the API Gateway; transform the incoming JSON into a valid XML message for the SOAP interface using mapping templates.

(B). Create a RESTful API with the API Gateway; pass the incoming JSON to the SOAP interface through an Application Load Balancer.

(C). Create a RESTful API with the API Gateway; pass the incoming XML to the SOAP interface through an Application Load Balancer.

(D). Create a RESTful API with the API Gateway; transform the incoming XML into a valid message for the SOAP interface using mapping templates.

***Answer:*** A Explanation

https://blog.codecentric.de/en/2016/12/serverless-soap-legacy-api-integration-java-awslambda-aws-api-gateway

**QUESTION NO: 394**

Which of the following platforms are supported by Elastic Beanstalk? Choose 2

Answers

(A). Apache Tomcat

(B). .NET

(C). IBM Websphere

(D). Oracle JBoss (E). Jetty

***Answer:*** A,B Explanation https://docs.aws.amazon.com/elasticbeanstalk/latest/platforms/platforms-supported.html

**QUESTION NO: 395**

A developer is migrating code to an AWS Lambda function that will access an Amazon Aurora MySQL database.

What is the MOST secure way to authenticate the function to the database?

(A). Store the database credentials as encrypted parameters in AWS Systems Manager Parameter Store Obtain the credentials from Systems Manager when the Lambda function needs to connect to the database

(B). Store the database credentials in AWS Secrets Manager Let Secrets Manager handle the rotation of the credentials, as required

(C). Store the database credentials in an Amazon S3 bucket that has a restrictive bucket policy for the Lambda role only when accessing the credentials Use AWS KMS to encrypt the data

(D). Create a policy with rds-db connect access to the database and attach it to the role assigned to the Lambda function

***Answer:*** B

**QUESTION NO: 396**

An application will ingest data at a very high throughput from many sources and must store the data in an Amazon S3 bucket. Which service would BEST accomplish this task?

(A). Amazon Kinesis Firehose

(B). Amazon S3 Acceleration Transfer

(C). Amazon SQS

(D). Amazon SNS

***Answer:*** A

**QUESTION NO: 397**

A Developer has been asked to create an AWS Lambda function that is triggered any time updates are made to items in an Amazon DynamoDB table. The function has been created, and appropriate permissions have been added to the Lambda execution role. Amazon DynamoDB streams have been enabled for the table, but the function is still not being triggered.

Which option would enable DynamoDB table updates to trigger the Lambda function?

(A). Change the StreamViewType parameter value to NEW\_AND\_OLD\_IMAGES for the

DynamoDB table

(B). Configure event source mapping for the Lambda function

(C). Map an Amazon SNS topic to the DynamoDB streams

(D). increase the maximum execution time (timeout) setting of the Lambda function

***Answer:*** B Explanation

https://docs.aws.amazon.com/en\_us/amazondynamodb/latest/developerguide/Streams.Lamb da.Tutorial.html Create an event source mapping to tell Lambda to send records from your stream to a Lambda function. You can create multiple event source mappings to process the same data with multiple Lambda functions, or process items from multiple streams with a single function.

**QUESTION NO: 398**

A developer is using AWS CodeDeploy to deploy an application running on Amazon EC2. The developer wants to change the file permissions for a specific deployment file. Which lifecycle event should a developer use to meet this requirement?

(A). Afterlnstall

(B). DownloadBundle

(C). Beforelnstall

(D). ValtdateService

***Answer:*** A

**QUESTION NO: 399**

A company needs to distribute firmware updates to its customers around the world.

Which service will allow easy and secure control of the access to the downloads at the lowest cost?

(A). Use Amazon CloudFront with signed URLs for Amazon S3

(B). Create a dedicated Amazon CloudFront Distribution for each customer

(C). Use Amazon CloudFront with AWS Lambda@Edge

(D). Use Amazon API Gateway and AWS Lambda to control access to an S3 bucket

***Answer:*** A Explanation

https://aws.amazon.com/blogs/networking-and-content-delivery/amazon-s3-amazoncloudfront-a-match-made-in

**QUESTION NO: 400**

NA

# 

# **QUESTION NO: 401**

A company is migrating its on-premises database to Amazon RDS for MySQL. The company has read-heavy workloads, and wants to make sure it re-factors its code to achieve optimum read performance for its queries.

How can this objective be met?

(A). Add database retries to effectively use RDS with vertical scaling

(B). Use RDS with multi-AZ deployment

(C). Add a connection string to use an RDS read replica for read queries (D). Add a connection string to use a read replica on an EC2 instance.

***Answer:*** C

https://aws.amazon.com/rds/features/read-replicas/?nc1=h\_ls

**QUESTION NO: 402**

A developer has designed a customer, facing application that is running on an Amazon EC2 instance. The application logs every request made to it. The application usually runs seamlessly, but a spike in traffic generates several logs that cause the disk to fill up and eventually run out of memory Company policy requires old to be centralized for analysis.

Which long-term solution should the developer employ to prevent the issue from reoccurring?

(A). Install the Amazon CloudWatch agent on the instance to send the logs to CloudWatch.

Delete the logs from the instance once they are sent to CloudWatch.

(B). Enable AWS Auto Scaling on Amazon Elastic Block Store (Amazon EBS) to automatically add volumes to the instance when it reaches a specified threshold.

(C). Enable AWS Auto Scaling on Amazon Elastic Block Store (Amazon EBS) a outomatically add volume to the instance when it reaches a specified threshold.

(D). Create an Amazon EventBridge (Amazon CloudWatch Events) rule to pull the logs from the instance.

Configure the rule to delete the logs they have been pulled.

***Answer:*** A

https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/Install-CloudWatch-Agent.html

**QUESTION NO: 403**

A company has 25:000 employees and is growing The company is creating an application that will be accessible to its employees only A developer is using Amazon S3 to store images and Amazon RDS to store application data. The company requires that all employee information remain in the legacy Security Assertion Markup Language (SAML) employee directory only and is not interested in mirroring any employee information on AWS. How can the developer provide authorized access for the employees who will be using this application so each employee can access their own application data only?

(A). Use Amazon VPC and keep all resources inside the VPC. and use a VPC link for the S3 bucket with the bucket policy.

(B). Use Amazon Cognito user pools, federate with the SAML provider and use user pool groups with an IAM policy

(C). Use an Amazon Cognito identity pool, federate with the SAML provider, and use an IAM condition key with a value for the cognito-identity.amazonaws com sub variable to grant access to the employees.

(D). Create a unique IAM role for each employee and have each employee assume the role to access the application so they can access their personal data only.

***Answer:*** C

https://docs.aws.amazon.com/IAM/latest/UserGuide/reference\_policies\_iam-condition-keys.html

**QUESTION NO: 404**

A developer must cache dependent artifacts from Maven Central, a public package repository, as part of an application's build pipeline The build pipeline has an AWS CodeArtifact repository where artifacts of the build are published The developer needs a solution that requires minimum changes to the build pipeline Which solution meets these requirements?

(A). Modify the existing CodeArtifact repository to associate an upstream repository with the public package repository

(B). Create a new CodeArtifact repository that has an external connection to the public package repository

(C). Create a new CodeArtifact domain that contains a new repository that has an external connection to the public package repository

(D). Modify the CodeArtifact repository resource policy to allow artifacts to be fetched from the public package repository

***Answer:*** B

*‘https://aws.amazon.com/blogs/devops/integrating-aws-codeartifact-package-mgmt-flow/*

**QUESTION NO: 405**

A company hosts a microservices application that uses Amazon API Gateway, AWS Lambda, Amazon Simple Queue Service (Amazon SOS), and Amazon DynamoDB, One of the Lambda functions adds messages to an SOS FIFO queue.

When a developer checks the application logs, the developer finds a few duplicated items in a DynamoDB table. The items were inserted by another polling function that processes messages from the queue.

What is the MOST likely cause of this issue?

(A). Write operations on the DynamoDB table are being throttled

(B). The SOS queue delivered the message to the function more than once

(C). API Gateway duplicated the message in the SOS queue

(D). The polling function timeout is greater than the queue visibility timeout

***Answer:*** B

**QUESTION NO: 406**

An application is being developed to audit several AWS accounts. The application will run in Account A and must access AWS services in Accounts B and C.

What is the MOST secure way to allow the application to call AWS services in each audited account?

(A). Configure cross-account roles in each audited account. Write code in Account A that assumes those roles

(B). Use S3 cross-region replication to communicate among accounts, with Amazon S3 event notifications to trigger Lambda functions

(C). Deploy an application in each audited account with its own role. Have Account A authenticate with the application

(D). Create an IAM user with an access key in each audited account. Write code in Account A that uses those access keys

***Answer:*** A Explanation https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial\_cross-account-with-roles.html

**QUESTION NO: 407**

A developer is building a web and mobile application for two types of users regular users and guest users Regular users are required to log in, but guest users do not log in Users should see only their data, regardless of whether they authenticate Users need AWS credentials before they can access AWS resources What is the MOST secure solution that the developer can implement to allow access for guest users?

(A). Use an Amazon Cognito credentials provider to issue temporary credentials that are linked to an unauthenticated role that has access to the required resources

(B). Set up an IAM user that has permissions to the required resources. Hardcode the IAM credentials in the web and mobile application.

(C). Generate temporary keys that are stored in AWS Key Management Service (AWS KMS)

Use the temporary keys to access the required resources

(D). Generate temporary credentials Store the temporary credentials in AWS Secrets Manager Use the temporary credentials to access the required resources

***Answer:*** A

**QUESTION NO: 408**

A developer has written an Amazon Kinesis Data Streams application. As usage grows and traffic increases over time, the application is regularly receiving

ProvisionedThroughputExceededException error messages Which steps should the developer take to resolve the error? (Select TWO.)

(A). Use Auto Scaling to scale the stream for better performance

(B). Increase the delay between the GetRecords call and the PutRecords call.

(C). Increase the number of shards in the data stream

(D). Specify a shard iterator using the Shardlterator parameter.

(E). Implement exponential backoff on the GetRecords call and the PutRecords call.

***Answer:*** ~~B,C~~ C,E

Reference: <https://docs.aws.amazon.com/streams/latest/dev/troubleshooting-consumers.html>

**QUESTION NO: 409**

A company wants to migrate an existing web application to AWS. The application consists of two web servers and a MySQL database The company wants the application to automatically scale in response to demand The company also wants to reduce its operational overhead for database backups and maintenance The company needs the ability to deploy multiple versions of the application concurrently What is the MOST operationally efficient solution that meets these requirements'?

(A). Deploy the application to AWS Elastic Beanstalk Migrate the database to an Amazon RDS Multi-AZ DB instance

(B). Create an Amazon Machine Image (AMI) that contains the application code Create an

Auto Scaling group that is based on the AMI Integrate the Auto Scaling group with an Application Load Balancer for the web servers Migrate the database to a MySQL instance that runs on an Amazon EC2 instance.

(C). Deploy the application to AWS Elastic Beanstalk Migrate the database to a MySQL instance that runs on an Amazon EC2 instance

(D). Create an Amazon Machine Image (AMI) that contains the application code Create an

Auto Scaling group that is based on the AMI. Integrate the Auto Scaling group with an

Application Load Balancer for the web servers. Migrate the database to an Amazon RDS

Multi-AZ DB instance

***Answer:*** A

**QUESTION NO: 410**

NA

**QUESTION NO: 411**

A developer tested an application locally and then deployed it to AWS Lambda While testing the application remotely the Lambda function fails with an access denied message How can this issue be addressed?

(A). Update the Lambda function's execution role to include the missing permissions

(B). Update the Lambda function's resource policy to include the missing permissions

(C). Include an 1AM policy document at the root of the deployment package and redeploy the Lambda function.

(D). Redeploy the Lambda function using an account with access to the AdministratorAccess policy

***M***

***Answer:*** A

https://aws.amazon.com/premiumsupport/knowledge-center/access-denied-lambda-s3-bucket/

**QUESTION NO: 412**

You attempt to store an object in the US-STANDARD region in Amazon S3, and receive a confirmation that it has been successfully stored. You then immediately make another API call and attempt to read this object. S3 tells you that the object does not exist What could explain this behavior?

(A). US-STANDARD uses eventual consistency and it can take time for an object to be readable in a bucket

(B). Objects in Amazon S3 do not become visible until they are replicated to a second region.

(C). US-STANDARD imposes a 1 second delay before new objects are readable.

(D). You exceeded the bucket object limit, and once this limit is raised the object will be visible.

***Answer:*** A Explanation

https://acloud.guru/forums/aws-certified-developer-associate/discussion/KGngHzVQ03OpeAA9jSP/i-cant-answ

https://acloud.guru/forums/aws-certified-developer-associate/discussion/K5WKXRAlJdOu58GREF\_/s3-questio

**QUESTION NO: 413**

A developer is writing a new AWS Serverless Application Model (AWS SAM) template with a new AWS Lambda function The Lambda function runs complex code. The developer wants to test the Lambda function with more CPU power. What should the developer do to meet this requirement?

(A). Increase the runtime engine version

(B). Increase the timeout

(C). Increase the number of Lambda layers.

(D). Increase the memory

***Answer:*** D

**QUESTION NO: 414**

An Amazon RDS database instance is used by many applications to look up historical data. The query rate is relatively constant. When the historical data is updated each day, the resulting write traffic slows the read query performance and affects all application users.

What can be done to eliminate the performance impact on application users?

(A). Make sure Amazon RDS is Multi-AZ so it can better absorb increased traffic.

(B). Create an RDS Read Replica and direct all read traffic to the replica.

(C). Implement Amazon ElastiCache in front of Amazon RDS to buffer the write traffic. (D). Use Amazon DynamoDB instead of Amazon RDS to buffer the read traffic.

***Answer:*** B Explanation https://aws.amazon.com/rds/details/read-replicas/

**QUESTION NO: 415**

An application displays a status dashboard. The status is updated by 1 KB messages from an SQS queue.

Although the status changes infrequently, the Developer must minimize the time between the message arrival in the queue and the dashboard update.

What technique provides the shortest delay in updating the dashboard?

(A). Retrieve the messages from the queue using long polling every 20 seconds.

(B). Reduce the size of the messages by compressing them before sending.

(C). Retrieve the messages from the queue using short polling every 10 seconds. (D). Reduce the size of each message payload by sending it in two parts.

***Answer:*** A Explanation

https://docs.aws.amazon.com/ko\_kr/AWSSimpleQueueService/latest/SQSDeveloperGuide/s qs-short-and-long-p

**QUESTION NO: 416**

A web application is using Amazon Kinesis Streams for clickstream data that may not be consumed for up to 12 hours.

How can the Developer implement encryption at rest for data within the Kinesis Streams?

(A). Enable SSL connections to Kinesis

(B). Use Amazon Kinesis Consumer Library

(C). Encrypt the data once it is at rest with a Lambda function

(D). Enable server-side encryption in Kinesis Streams

***Answer:*** D

Explanation

https://docs.aws.amazon.com/streams/latest/dev/what-is-sse.html

https://aws.amazon.com/about-aws/whats-new/2017/07/amazon-kinesis-streams-introducesserver-side-encryptio

**QUESTION NO: 417**

A gaming company is developing a mobile game application for iOS® and Android® platforms. This mobile game securely stores user data locally on the device. The company wants to allow users to use multiple device for the game, which requires user data synchronization across device.

Which service should be used to synchronize user data across devices without the need to create a backend application?

(A). AWS Lambda

(B). Amazon S3

(C). Amazon DynamoDB

(D). Amazon Cognito

***Answer:*** D

https://docs.aws.amazon.com/cognito/latest/developerguide/cognito-sync.html

**QUESTION NO: 418**

A developer must allow guest users without logins to access an Amazon Cognito-enabled site to view files stored within an Amazon S3 bucket How should the developer meet these requirements'?

(A). Create a blank user ID in a user pool, add to the user group, and grant access to AWS resources

(B). Create a new identity pool, enable access to unauthenticated identities and grant access to AWS resources

(C). Create a new user pool, enable access to unauthenticated identities, and grant access to AWS resources.

(D). Create a new user pool disable authentication access, and grant access to AWS resources

***Answer:*** B

**QUESTION NO: 419**

An application deployed on AWS Elastic Beanstalk experiences increased error rates during deployments of new application versions, resulting in service degradation for users. The Development team believes that this is because of the reduction in capacity during the deployment steps. The team would like to change the deployment policy configuration of the environment to an option that maintains full capacity during deployment while using the existing instances.

Which deployment policy will meet these requirements while using the existing instances? (A). All at once

(B). Rolling

(C). Rolling with additional batch

(D). Immutable

***Answer:*** D

Explanation

https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/using-features.rolling-versiondeploy.html

**QUESTION NO: 420**

NA

**QUESTION NO: 421**

A Developer is writing a Linux-based application to run on AWS Elastic Beanstalk.

Application requirements state that the application must maintain full capacity during updates while minimizing cost.

Which type of Elastic Beanstalk deployment policy should the Developer specify for the environment?

(A). Immutable

(B). Rolling

(C). All at Once

(D). Rolling with additional batch

***Answer:*** D

Explanation

https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/using-features.rolling-versiondeploy.html

**QUESTION NO: 422**

To include objects defined by the AWS Serverless Application Model (SAM) in an AWS CloudFormation template, in addition to Resources, what section MUST be included in the document root?

(A). Conditions

(B). Globals

(C). Transform (D). Properties

***Answer:*** C

Explanation

https://github.com/awslabs/serverless-application-model/blob/master/versions/2016-10-

31.md

https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/samspecification-template-ana

**QUESTION NO: 423**

A web application is designed to allow new users to create accounts using their email addresses. The application will store attributes for each user, and is expecting millions of user to sign up.

What should the Developer implement to achieve the design goals?

(A). Amazon Cognito user pools

(B). AWS Mobile Hub user data storage

(C). Amazon Cognito Sync

(D). AWS Mobile Hub cloud logic

***Answer:*** A

https://aws.amazon.com/cognito/

**QUESTION NO: 424**

A serverless application uses an API Gateway and AWS Lambda.

Where should the Lambda function store its session information across function calls?

(A). In an Amazon DynamoDB table

(B). In an Amazon SQS queue

(C). In the local filesystem

(D). In an SQLite session table using -DSQLITE\_ENABLE\_SESSION

***Answer:*** A

https://aws.amazon.com/lambda/faqs/

**QUESTION NO: 425**

A Developer has setup an Amazon Kinesis Stream with 4 shards to ingest a maximum of 2500 records per second. A Lambda function has been configured to process these records.

In which order will these records be processed?

(A). Lambda will receive each record in the reverse order it was placed into the stream following a LIFO (last-in, first-out) method

(B). Lambda will receive each record in the exact order it was placed into the stream following a FIFO (first-in, first-out) method.

(C). Lambda will receive each record in the exact order it was placed into the shard following a FIFO (first-in, first-out) method. There is no guarantee of order across shards.

(D). The Developer can select FIFO, (first-in, first-out), LIFO (last-in, last-out), random, or request specific record using the getRecords API.

***Answer:*** C

**QUESTION NO: 426**

***A developer is using Amazon DynamoDB to store application data . The developer wants to further improve application performance by reducing response limes for read and write operations.***

***Which DynamoDB feature should be used to meet these requirement?***

(A). Amazon DynamoDB Streams

(B). Amazon DynamoDB Accelerator

(C). Amazon DynamoDB global tables

(D). Amazon DynamoDB transactions

***Answer:*** B Explanation

<https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/DAX.html>

https://aws.amazon.com/ko/blogs/database/amazon-dynamodb-accelerator-dax-a-readthroughwrite-through-cach

**====================**

**QUESTION NO: 427**

***A Developer is working on an application that handles 10MB documents that contain highlysensitive data.***

***The application will use AWS KMS to perform client-side encryption.***

***What steps must be followed?***

(A). Invoke the Encrypt API passing the plaintext data that must be encrypted, then reference the customer managed key ARN in the KeyId parameter

(B). Invoke the GenerateRandom API to get a data encryption key, then use the data encryption key to encrypt the data

(C). Invoke the GenerateDataKey API to retrieve the encrypted version of the data encryption key to encrypt the data

(D). Invoke the GenerateDataKey API to retrieve the plaintext version of the data encryption key to encrypt the data

***Answer:*** D

**Explanation:**

<https://docs.aws.amazon.com/AmazonS3/latest/dev/UsingClientSideEncryption.html>

GenerateDataKey API: Generates a unique data key. This operation returns a plaintext copy of the data key and a copy that is encrypted under a customer master key (CMK) that you specify. You can use the plaintext key to encrypt your data outside of KMS and store the encrypted data key with the encrypted data.

**================**

**QUESTION NO:428**

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 the applications.

How should the Developer identify and troubleshoot the root cause of the performance issues in production?

(A). Add logging statements to the Lambda functions, then use Amazon CloudWatch to view the logs.

(B). Use AWS Cloud Trail and then examine the logs

(C). Use AWS X-Ray, then examine the segments and errors

(D). Run Amazon Inspector agents and then analyze performance

***Answer:*** C

Explanation

https://aws.amazon.com/blogs/developer/new-analyze-and-debug-distributed-applicationsinteractively-using-aw

**===============**

**QUESTION NO:429**

***A company runs an e-commerce website that uses Amazon DynamoDB where pricing for items is dynamically updated in real time. At any given time, multiple updates may occur simultaneously for pricing information on a particular product. This is causing the original editor's changes to be overwritten without a proper review process.***

***Which DynamoDB write option should be selected to prevent this overwriting?***

(A). Concurrent writes

(B). Conditional writes

(C). Atomic writes

(D). Batch writes

***Answer:*** B Explanation

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/WorkingWithItems.ht ml#WorkingWithIte

**====================**

**QUESTION NO: 430**

NA

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**QUESTION NO:431**

***In a multi-container Docker environment in AWS Elastic Beanstalk, what is required to configure container instances in the environment?***

(A). An Amazon ECS task definition

(B). An Amazon ECS cluster

(C). A Docker in an application package

(D). A CLI for Elastic Beanstalk

***Answer:*** A Reference:

<https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/create_deploy_docker_ecs.html>

**============**

**QUESTION NO:432**

***A company hosts a monolithic application on Amazon EC2 instances. The company starts converting some features of the application to a serverless architecture by using Amazon API Gateway and AWS Lambda After the migration, some users report problems with payment processing Upon inspection, a developer discovers that the Lambda function that calls the external payment API is taking longer than expected Therefore, the API Gateway requests are timing out What should the developer do to resolve this issue in the serverless architecture1?***

(A). Use the EC2 instances to make the API calls to the payment API

(B). Use Amazon Simple Queue Service (Amazon SQS) with API Gateway and the Lambda function to asynchronously call the payment API

(C). Increase the API Gateway timeout duration to match the payment API time

(D). Increase the Lambda function's memory to increase the network bandwidth and increase the speed of the payment API calls

***Answer:*** B

**================**

**QUESTION NO: 433**

***A developer is building a new application that uses an Amazon DynamoDB table The specification states that all items that are older than 48 hours must be removed.***

***Which solution will meet this requirement?***

(A). Create a new attribute that has the Number data type Add a local secondary index (LSI) for this attribute and enable TTL with an expiration of 48 hours In the application code set the value of this attribute to the current timestamp for each new item that is being inserted

(B). Create a new attribute that has the String data type Add a local secondary index (LSI) for this attribute, and enable TTL with an expiratiotvof 48 hours In the application code set the value of this attribute to the current timestamp for each new item that is being inserted.

(C). Create a new attribute that has the Number data type Enable TTL on the DynamoDB table for this attribute In the application code set the value of this attribute to the current timestamp plus 48 hours for each new item that is being inserted

(D). Create a new attribute that has the String data type Enable TTL on the DynamoDB table for this attribute in the application code, set the value of this attribute to the current timestamp plus 48 hours for each new item that is being inserted.

***Answer:*** C

**Explanation :**

<https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/howitworks-ttl.html>

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**QUESTION NO: 434**

***A team deployed an AWS CloudFormation template to update a stack that already included an Amazon RDS DB instance However, before the deployment of the update the team changed the name of the DB instance on the template by mistake The DeletionPoIicy attribute for all resources was not changed from the default values What will be the result of this mistake?***

(A). AWS CloudFormation will create a new database and delete the old one

(B). AWS CloudFormation will create a new database and keep the old one

(C). AWS CloudFormation will overwrite the existing database and rename it

(D). AWS CloudFormation will leave the existing database and will not create a new one

***Answer:*** A

<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-attribute-deletionpolicy.html>

**==============**

**QUESTION NO: 435**

***A Developer is writing an application that runs on Amazon EC2 instances in an Auto scaling group. The application data is stored in an Amazon DynamoDB table and records are constantly updated by all instances.***

***An instance sometimes retrieves old data. The Developer wants to correct this by making sure the reads are strongly consistent.***

***How can the developer accomplish this?***

(A). Set consistentRead to true when calling Getitem.

(B). Create a new DynamoDB Accelerator (DAX) table.

(C). Set consistency to strong when calling Update Table. (D). Use the Getshardlterator command.

***Answer:*** A

***(A)***

Reference: <https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.ReadConsistency.html>

**===============**

**QUESTION NO:436**

***Which of the following services are included at no additional cost with the use of the AWS platform?*** Choose

2

Answers

(A). Simple Storage Service

(B). Elastic Compute Cloud

(C). Auto Scaling

(D). Elastic Load Balancing

(E). CloudFormation

(F). Simple Workflow Service

***Answer:*** C,E

**===============**

**QUESTION NO: 437**

***A Developer must encrypt a 100-GB object using AWS KMS.***

***What is the BEST approach?***

(A). Make an Encrypt API call to encrypt the plaintext data as ciphertext using a customer master key (CMK)

(B). Make an Encrypt API call to encrypt the plaintext data as ciphertext using a customer master key (CMK) with imported key material

(C). Make a GenerateDataKey API call that returns a plaintext key and an encrypted copy of a data key. Use a plaintext key to encrypt the data

(D). Make a GenerateDataKeyWithoutPlaintext API call that returns an encrypted copy of a data key. Use an encrypted key to encrypt the data

***Answer:*** ~~D~~ C

***(C)***

Explanation https://docs.aws.amazon.com/kms/latest/APIReference/API\_GenerateDataKey.html

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**QUESTION NO:438**

***A developer has launched an application that calls an API by way of Amazon API Gateway. It offers information that changes several times a day, but is not updated in real time. The application has become so popular that the API endpoint is overloaded and that traffic to the endpoint must be reduced.***

***What can the developer do to address the performance issues?***

(A). Enable API caching in Amazon ElastiCache.

(B). Enable an Auto Scaling group on the endpoint service and database.

(C). Create an additional API Gateway and use an Application Load Balancer

***Answer:*** A

**QUESTION NO:439**

***A company has deployed an application on AWS Elastic Beanstalk. The company has configured the Auto Scaling group that is associated with the Elastic Beanstalk environment to have five Amazon EC2 instances If the capacity is fewer than four EC2 instances during the deployment, application performance degrades. The company is using the all-at-once deployment policy What is the MOST cost-effective way to solve the deployment issue?***

(A). Change the Auto Scaling group to six desired instances

(B). Change the deployment policy to traffic splitting Specify an evaluation time of 1 hour

(C). Change the deployment policy to rolling with additional batch Specify a batch size of 1.

(D). Change the deployment policy to rolling Specify a batch size of 2

***Answer:*** C

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**QUESTION NO: 440**

NA

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**QUESTION NO: 441**

***A company is developing a serverless ecommerce web application The application needs to make coordinated, all-or-nothing changes to multiple items in the company's inventory table in Amazon DynamoDB.***

***Which solution will meet these requirements?***

(A). Enable transactions for the DynamoDB table Use the BatchWriteltem operation to update the items.

(B). Use the TransactWriteitem operation to group the changes Update the items in the table

(C). Set up a FIFO queue using Amazon SQS. Group the changes in the queue. Update the table based on the grouped changes

(D). Create a transaction table in an Amazon Aurora DB cluster to manage the transactions

Write a backend process to sync the Aurora DB table and the DynamoDB table

***Answer:*** B

Explanation

TransactWriteItems is a synchronous write operation that groups up to 25 action requests.

The BatchWriteItem operation puts or deletes multiple items in one or more tables. https://docs.aws.amazon.com/AWSJavaScriptSDK/latest/AWS/DynamoDB.html

<https://aws.amazon.com/blogs/mobile/appsync-caching-transactions/>

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**QUESTION NO:442**

***A developer is building an AWS Lambda function that will dynamically generate and send a weekly newsletter to 100.000 users This newsletter contains both static text and images The developer needs a fast and highly scalable place to store the images that will be hyperlinked in the newsletter Where should the developer store these images?***

(A). Use an Amazon DynamoDB table with DynamoDB Streams and read capacity auto scaling enabled

(B). Use an Amazon S3 bucket and S3 Transfer Acceleration to speed up the image download

(C). Use an Amazon Aurora database with a public DNS endpoint and auto scaling enabled

(D). Use an Amazon S3 backed Amazon CloudFront distribution with a high Time-to-Live (TTL) to maximize caching

***Answer:*** D

**================**

**QUESTION NO: 443**

***A developer is building an application integrating an Amazon API Gateway with an AWS Lambda function.***

***When calling the API, the developer receives the following error. Wed Nov 03 01:13:00 UTC 2017 : Method completed with status: 502 What should the developer do to resolve the error ?***

(A). Change the HTTP endpoint of the API to an HTTPS endpoint.

(B). Change the format of the payload sent to the API Gateway.

(C). Change the format of the Lambda function response to the API call.

(D). Change the authorization header in the API call to access the Lambda function.

***Answer:*** C

Reference:  
<https://aws.amazon.com/premiumsupport/knowledge-center/malformed-502-api-gateway/>

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**QUESTION NO: 444**

***A Developer must deploy a new AWS Lambda function using an AWS CloudFormation template.***

***Which procedures will deploy a Lambda function?*** (Select TWO.)

(A). Upload the code to an AWS CodeCommit repository, then add a reference to it in an AWS::Lambda::Function resource in the template.

(B). Create an AWS::Lambda::Function resource in the template, then write the code directly inside the CloudFormation template.

(C). Upload a .ZIP file containing the function code to Amazon S3, then add a reference to it in an AWS::Lambda::Function resource in the template.

(D). Upload a .ZIP file to AWS CloudFormation containing the function code, then add a reference to it in an AWS::Lambda::Function resource in the template.

(E). Upload the function code to a private Git repository, then add a reference to it in an AWS::Lambda::Function resource in the template.

***Answer:*** B,C Explanation

https://aws.amazon.com/blogs/infrastructure-and-automation/deploying-aws-lambdafunctions-using-aws-cloudf

**================**

**QUESTION NO: 445**

***An application is designed to use Amazon SQS to manage messages from many independent senders. Each sender's messages must be processed in the order they are received.***

***Which SQS feature should be implemented by the Developer?***

(A). Configure each sender with a unique MessageGroupId (B). Enable MessageDeduplicationIds on the SQS queue

(C). Configure each message with unique MessageGroupIds.

(D). Enable ContentBasedDeduplication on the SQS queue

***Answer:*** A

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**QUESTION NO: 446**

***An application ingests a large number of small messages and stores them in a database. The application uses AWS Lambda. A development team is making changes to the application's processing logic. In testing, it is taking more than 15 minutes to process each message. The team is concerned the current backend may time out.***

***Which changes should be made to the backend system to ensure each message is processed in the MOST scalable way1?***

(A). Add the messages to an Amazon SQS queue Set up an Amazon EC2 instance to poll the queue and process messages as they arrive.

(B). Add the messages to an Amazon SQS queue. Set up Amazon EC2 instances in an Auto Scaling group to poll the queue and process the messages as they arrive.

(C). Create a support ticket to increase the Lambda timeout to 60 minutes to allow for increased processing time

(D). Change the application to directly insert the body of the message into an Amazon RDS database.

***Answer:*** B

**Community votes Ans : B**

**==================**

**QUESTION NO: 447**

***A developer is working on an AWS Lambda function that accesses Amazon DynamoDB The Lambda function must retrieve an item and update some of its attributes. or create the item if it does not exist. The Lambda function has access to the primary key.***

***Which IAM permissions should the developer request for the Lambda function to achieve this functionality?***

(A). dynaracdb:DeleteItem dynamodb:GetItem dynamcdb:Putltem

(B). dynamodb:Updateltem dynamcdb:Getltem dynamodb:DescribeTable

(C). dynamcdb:GetRecords dynamcdb:Putltem dynamodb:updateTable

(D). dynamodb:Updateltem dynamodb:Getltem dynamodb:Putltem

***Answer:*** D

Reference: https://docs.aws.amazon.com/AWSJavaScriptSDK/latest/AWS/DynamoDB.html

**Most voted(100%): D**

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**QUESTION NO:448**

***A company needs a new REST API that can return information about the contents of an Amazon S3 bucket, such as a count of the objects stored in it. The company has decided that the new API should be written as a microservice using AWS Lambda and Amazon API Gateway.***

***How should the Developer ensure that the microservice has the necessary access to the Amazon S3 bucket, while adhering to security best practices?***

(A). Create an IAM user that has permissions to access the Amazon S3 bucket, and store the IAM user credentials in the Lambda function source code.

(B). Create an IAM role that has permissions to access the Amazon S3 bucket and assign it to the Lambda function as its execution role.

(C). Create an Amazon S3 bucket policy that specifies the Lambda service as its principal and assign it to the Amazon S3 bucket.

(D). Create an IAM role, attach the AmazonS3FullAccess managed policy to it, and assign the role to the Lambda function as its execution role.

***Answer:*** B Explanation

https://aws.amazon.com/premiumsupport/knowledge-center/lambda-execution-role-s3bucket/

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**QUESTION NO:449**

***An on-premises application is implemented using a Linux, Apache, MySQL and PHP (LAMP) stack. The Developer wants to run this application in AWS.***

***Which of the following sets of AWS services can be used to run this stack?***

(A). Amazon API Gateway, Amazon S3

(B). AWS Lambda, Amazon DynamoDB

(C). Amazon EC2, Amazon Aurora

(D). Amazon Cognito, Amazon RDS

(E). Amazon ECS, Amazon EBS

***Answer:*** C

**QUESTION NO: 450**

NA

**QUESTION NO: 451**

An application is experiencing performance issues based on increased demand. This increased demand is on read-only historical records pulled from an Amazon RDS-hosted database with custom views and queries. A developer improve performance without changing the database structure.

Which approach will improve performance and MINIMIZE management overhead?

(A). Deploy Amazon DynamoDB, move all the data, and point to DynamoDB.

(B). Deploy Amazon ElasticCache for Redis and cache the data for the application.

(C). Deploy Memcached on Amazon EC2 and cache the data for the application. (D). Deploy Amazon DynamoDB Accelerator (DAX) on Amazon RDS to improve cache performance

***Answer:*** B

**QUESTION NO: 452**

A company is developing a new web application in Python A developer must deploy the application using AWS Elastic Beanstalk from the AWS Management Console The developer creates an Elastic Beanstalk source bundle to upload using the console Which of the following are requirements when creating the source bundle? (Select TWO.)

(A). The source bundle must include the ebextensions.yaml file.

(B). The source bundle must not include a top-level directory.

(C). The source bundle must be compressed with any required dependencies in a top-level parent folder

(D). The source bundle must be created as a single zip or war file (E). The source bundle must be uploaded into Amazon EFS.

***Answer:*** B,D

**QUESTION NO: 453**

A Developer needs to design an application running on AWS that will be used to consume Amazon SQS messages that range from 1 KB up to 1GB in size.

How should the Amazon SQS messages be managed?

(A). Use Amazon S3 and the Amazon SQS CLI.

(B). Use Amazon S3 and the Amazon SQS Extended Client Library for Java.

(C). Use Amazon EBS and the Amazon SQS CLI. (D). Use Amazon EFS and the Amazon SQS CLI.

***Answer:*** B

Reference:

https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqslimit s.html

**QUESTION NO: 454**

A developer has built an application using Amazon Cognito for authentication and authorization. After a user is successfully logged in to the application, the application creates a user record in an Amazon DynamoDB table.

What is the correct flow to authenticate the user and create a record in the DynamoDB table? (A). Authenticate and get a token from an Amazon Cognito user pool. Use the token to access DynamoDB.

(B). Authenticate and get a token from an Amazon Cognito identity pool. Use the token to access DynamoDB.

(C). Authenticate and get a token from an Amazon Cognito user pool Exchange the token for AWS credentials with an Amazon Cognito identity pool. Use the credential to access DynamoDB.

(D). Authenticate and get a token from an Amazon Cognito identity pool. Exchange the token for AWS credentials with an Amazon Cognito user pool. Use the credentials to access

DynamoDB

***Answer:*** ~~B~~ C

**QUESTION NO: 455**

An application contains two components one component to handle HI IP requests, and another component to handle background processing tasks Bach component must scale independently The developer wants to deploy this application using AWS Elastic Beanstalk.

How should this application be deployed, based on these requirements?

(A). Deploy the application in a single Elastic Beanstalk environment

(B). Deploy each component in a separate Elastic Beanstalk environment

(C). Use multiple Elastic Beanstalk environments for the HTTP component but one environment for the background task component

(D). Use multiple Elastic Beanstalk environments for the background task component but one environment tor the HTTP component

***Answer:*** A

**QUESTION NO: 456**

NA

**QUESTION NO: 457**

While developing an application that runs on Amazon EC2 in an Amazon VPC, a Developer identifies the need for centralized storage of application-level logs.

Which AWS service can be used to securely store these logs?

(A). Amazon EC2 VPC Flow Logs

(B). Amazon CloudWatch Logs

(C). Amazon CloudSearch

(D). AWS CloudTrail

***Answer:*** B

https://aws.amazon.com/answers/logging/centralized-logging/

**QUESTION NO: 458**

A company has a multi-tiered web application on AWS. During a recent spike in traffic, one of the primary relational databases on Amazon RDS could not serve all the traffic. Some read queries for repeatedly accessed items failed, so users received error messages.

What can be done to minimize the impact on database read queries MOST efficiently during future traffic spikes?

(A). Use Amazon S3 to cache database query results.

(B). Use Amazon RDS as a custom origin for Amazon CloudFront.

(C). Use local storage and memory on Amazon EC2 instances to cache data. (D). Use Amazon ElastiCache in front of the primary database to cache data.

***Answer:*** D

**QUESTION NO: 459**

Which of the following is chosen as the default region when making an API call with an AWS

SDK?

(A). ap-northeast-1

(B). us-west-2

(C). us-east-1

(D). eu-west-1

(E). us-central-1

***Answer:*** C

Explanation https://docs.aws.amazon.com/sdk-for-java/v1/developer-guide/java-dg-region-selection.html. This section applies only when using a client builder to access AWS services. AWS clients created by using the client constructor will not automatically determine region from the environment and will, instead, use the default SDK region (USEast1).

**QUESTION NO: 460**

A company has a legacy application that was migrated to a fleet of Amazon EC2 instances. The application stores data in a MySQL database that is currently installed on a single EC2 instance The company has decided to migrate the database from the EC2 instance to MySQL on Amazon RDS.

What should the developer do to update the application to support data storage in Amazon

RDS?

(A). Update the database connection parameters in the application to point to the new RDS instance

(B). Add a script to the EC2 instance that implements an AWS SDK for requesting database credentials.

(C). Create a new EC2 instance with an IAM role that allows access to the new RDS database

(D). Create an AWS Lambda function that will route traffic from the EC2 instance to the RDS database.

***Answer:*** A

**QUESTION NO: 461**

A company is providing read access to objects in an Amazon S3 bucket for different customers The company uses 1AM permissions to resent access to the S3 bucket The customers can access only their own files Due to a regulation requirement the company needs to enforce encryption in transit for interactions with Amazon S3 Which solution will meet these requirements?

(A). Add a bucket policy to the S3 bucket to deny S3 actions when the aws SecureTransport condition is equal to false.

(B). Add a bucket policy to the S3 bucket to deny S3 actions when the s3 x-amz-acl condition is equal to public-read

(C). Add an IAM policy to the IAM users to enforce the usage of the AWS SDK.

(D). A Add an IAM policy to the IAM users that allows S3 actions when the s3 x-amz-acl condition is equal to bucket-owner-read

***Answer:*** A

**QUESTION NO: 462**

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 CloudWatch Events that will monitor the S3 bucket and then insert the records into DynamoDB

(B). Configure an S3 event to invoke a Lambda function that inserts records into DynamoDB (C). Create a 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

**QUESTION NO: 463**

A developer is creating as AWS lambda function that generates a new file each time it runs. Each new file must be checked into an AWS CodeCommit repository hosted in the same AWS account.

How should the developer accomplish this?

(A). When the Lambda function starts, use the Git CLI to Clone the repository. Check the new file into the cloned repository and push the change.

(B). After the new file is created in Lambda, use cURL to invoke the CodeCommit API. Send the file to the repository.

(C). Use an AWS SDK to instantiate a CodeCommit Client. Invoke the put \_ file method to add the file to the repository.

(D). Upload the new file to an Amazon S3 bucket. Create an AWS step Function to accept S3 events. In the step Function, add the new file to the repository.

***Answer:*** ~~D~~ C

**QUESTION NO: 464**

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

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

(A). Amazon S3

(B). AWS CloudTrail

(C). Amazon CloudWatch

(D). Amazon DynamoDB

***Answer:*** C

**QUESTION NO: 465**

A developer needs to deploy a new version to an AWS Elastic Beanstalk application How can the developer accomplish this task?

(A). Upload and deploy the new application version in the Elastic Beanstalk console

(B). Use the eb init CLI command to deploy a new version '

(C). Terminate the current Elastic Beanstalk environment and create a new one

(D). Modify the ebextensions folder to add a source option to services

***Answer:*** A

**QUESTION NO: 466**

A developer wants to secure sensitive configuration date such as passwords, database strings, and application license codes. Access to this sensitive information must be tracked for future audit purposes.

(A). In an encrypted file on the source code bundle; grant the application access with Amazon IAM

(B). In the Amazon EC2 Systems Manager Parameter Store; grant the application access with IAM

(C). On an Amazon EBS encrypted volume attach the volume to an Amazon EC2 instance to access the data

(D). As on object in on Amazon S3 bucket, grant on Amazon EC2 instance access with on IAM rob.

***Answer:*** B

https://aws.amazon.com/blogs/security/how-to-enhance-the-security-of-sensitive-customer-data-by-using-amazon-cloudfront-field-level-encryption/

**QUESTION NO: 467**

A Developer is making changes to a custom application that is currently using AWS Elastic Beanstalk.

After the Developer completes the changes, what solutions will update the Elastic Beanstalk environment with the new application version? (Choose two.)

(A). Package the application code into a .zip file, and upload, then deploy the packaged application from the AWS Management Console

(B). Package the application code into a .tar file, create a new application version from the

AWS Management Console, then update the environment by using AWS CLI

(C). Package the application code into a .tar file, and upload and deploy the packaged application from the AWS Management Console

(D). Package the application code into a .zip file, create a new application version from the packaged application by using AWS CLI, then update the environment by using AWS CLI (E). Package the application code into a .zip file, create a new application version from the

AWS Management Console, then rebuild the environment by using AWS CLI

***Answer:*** ~~C,D~~ **A,D**

**QUESTION NO: 468**

A Developer is creating an Auto Scaling group whose instances need to publish a custom metric to Amazon CloudWatch.

Which method would be the MOST secure way to authenticate a CloudWatch PUT request? (A). Create an IAM user with PutMetricData permission and put the user credentials in a private repository; have applications pull the credentials as needed.

(B). Create an IAM user with PutMetricData permission, and modify the Auto Scaling launch configuration to inject the user credentials into the instance user data.

(C). Modify the CloudWatch metric policies to allow the PutMetricData permission to instances from the Auto Scaling group.

(D). Create an IAM role with PutMetricData permission and modify the Auto Scaling launching configuration to launch instances using that role.

***Answer:*** D

**QUESTION NO: 469**

A developer has built a market application that stores pricing data in Amazon DynamoDB with Amazon ElastiCache in front. The prices of items in the market change frequently Sellers have begun complaining that, after they update the price of an item, the price does not actually change in the product listing What could be causing this issue?

(A). The cache is not being invalidated when the price of the item is changed

(B). The price of the item is being retrieved using a write-through ElastiCache cluster (C). The DynamoDB table was provisioned with insufficient read capacity (D). The DynamoDB table was provisioned with insufficient write capacity.

***Answer:*** A

**QUESTION NO: 470**

NA

**QUESTION NO: 471**

A developer is building an application on Amazon EC2 The developer encountered an "Access Denied" error on some of the API calls to AWS services while testing The developer needs to modify permissions that have been already given to the instance How can these requirements be met with minimal changes and minimum downtime?

(A). Make a new 1AM role with the needed permissions Stop the instance. Attach the new 1AM role to the instance Start the instance.

(B). Delete the existing 1AM role Attach a new 1AM role with the needed permissions

(C). Stop the instance Update the attached 1AM role adding the needed permissions. Start the instance

(D). Update the attached 1AM role adding the needed permissions

***Answer:*** D

**QUESTION NO: 472**

A company requires objects that are stored in Amazon S3 to be encrypted. The company is currently using server-side encryption with AWS KMS managed encryption keys (SSE-KMS) A developer needs to optimize the cost-effectiveness of the encryption mechanism without negatively affecting performance What should the developed to meet these requirements'?

(A). Change the encryption type to customer-provided keys

(B). Configure the S3 bucket to use an S3 Bucket Key for SSE-KMS

(C). Use S3 bucket policies to limit the principals who can create objects.

(D). Use a custom policy to limit the number of AWS KMS calls that are allowed

***Answer:*** B

**QUESTION NO: 473**

A company is migrating from a monolithic architecture to a microservices-based architecture. The Developers need to refactor the application so that the many microservices can asynchronously communicate with each other without impacting performance.

Use of which managed AWS services will enable asynchronous message passing? (Choose two.)

(A). Amazon SQS

(B). Amazon Cognito

(C). Amazon Kinesis

(D). Amazon SNS

(E). Amazon ElastiCache

***Answer:*** A,D

**QUESTION NO: 474**

A company is using an AWS Lambda function to process records from an Amazon Kinesis data stream The company recently observed slow processing of the records. A developer notices that the iterator age metric for the function is Increasing and that the Lambda run duration is constantly above normal.

Which actions should the developer take to increase the processing speed? (Select TWO.)

(A). Increase the number of shards of the Kinesis data stream

(B). Decrease the timeout of the Lambda function

(C). Increase the memory that is allocated to the Lambda function.

(D). Decrease the number of shards of the Kinesis data stream

(E). Increase the timeout of the Lambda function

***Answer:*** ~~D,E~~ A,C

<https://aws.amazon.com/premiumsupport/knowledge-center/lambda-iterator-age/>

**QUESTION NO: 475**

A company has a website that is developed in PHP and WordPress and is launched using AWS Elastic Beanstalk. There is a new version of the website that needs to be deployed in the Elastic Beanstalk environment. The company cannot tolerate having the website offline if an update fails. Deployments must have minimal impact and rollback as soon as possible. What deployment method should be used?

(A). All at once

(B). Rolling

(C). Snapshots

(D). Immutable

***Answer:*** D

Explanation

https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/environmentmgmt-updatesimmutable.html

**QUESTION NO: 476**

A Developer is creating a Lambda function and will be using external libraries that are not included in the standard Lambda libraries.

What action would minimize the Lambda compute time consumed?

(A). Install the dependencies and external libraries at the beginning of the Lambda function

. (B). Create a Lambda deployment package that includes the external libraries.

(C). Copy the external libraries to Amazon S3, and reference the external libraries to the S3 location.

(D). Install the external libraries in Lambda to be available to all Lambda functions.

***Answer:*** B

https://docs.aws.amazon.com/lambda/latest/dg/configuration-layers.html

**QUESTION NO: 477**

A developer needs to create an application that supports Security Assertion Markup

Language (SAML) and Facebook authentication It must also allow access to AWS services, such as Amazon DynamoDB.

Which AWS service or feature will meet these requirements with the LEAST amount of additional coding?

(A). AWSAppSync

(B). Amazon Cognito identity pools

(C). Amazon Cognito user pools

(D). Amazon Lambda@Edge

***Answer:*** B

Reference: https://aws.amazon.com/blogs/mobile/amazon-cognito-user-pools-supportsfederation-with-saml/

https://aws.amazon.com/premiumsupport/knowledge-center/cognito-user-pools-identity-pools/

**QUESTION NO: 478**

A Developer is migrating existing applications to AWS. These applications use MongoDB as their primary data store, and they will be deployed to Amazon EC2 instances. Management requires that the Developer minimize changes to applications while using AWS services Which solution should the Developer use to host MongoDB in AWS?

(A). Install MongoDB on the same instance where the application is running

(B). Deploy Amazon DocumentDB in MongoDB compatibility mode

(C). Use Amazon API Gateway to translate API calls from MongoDB to Amazon DynamoDB. (D). Replicate the existing MongoDB workload to Amazon DynamoDB

***Answer:*** D

**QUESTION NO: 479**

A company has a two-tier application running on an Amazon EC2 server that handles all of its AWS based e-commerce activity During peak times, the backend servers that process orders are overloaded with requests.

This results in some orders failing to process. A developer needs to create a solution that will re-factor the application.

Which steps will allow for more flexibility during peak times, while still remaining costeffective? (Select TWO.)

(A). Increase the backend T2 EC2 instance sees to xl to handle the largest possible load throughout the year

(B). implement an Amazon SQS queue to decouple the front-end and backend servers (C). Use an Amazon SNS queue to decouple the front-end and backend servers.

(D). Migrate the backend servers to on-premises and pull from an Amazon SNS queue

(E). Modify the backend servers to pull from an Amazon SQS queue.

***Answer:*** ~~C,D,~~ B,E

**QUESTION NO: 480**

NA

**QUESTION NO: 481**

An on-premises legacy application is caching data files locally and writing shared images to local disks.

What is necessary to allow for horizontal scaling when migrating the application to AWS? (A). Modify the application to have both shared images and caching data written to Amazon EBS.

(B). Modify the application to read and write cache data on Amazon S3, and also store shared images on S3.

(C). Modify the application to use Amazon S3 for serving shared images; cache data can then be written to local disks.

(D). Modify the application to read and write cache data on Amazon S3, while continuing to write shared images to local disks.

***Answer:*** C

https://docs.aws.amazon.com/whitepapers/latest/s3-optimizing-performance-best-practices/using-caching-for-frequently-accessed-content.html

**QUESTION NO: 482**

A company is using continuous integration and continuous delivery systems. A Developer now needs to automate a software package deployment to both Amazon EC2 instances and virtual servers running on-premises.

Which AWS service should be used to accomplish this?

(A). AWS CodePipeline

(B). AWS CodeBuild

(C). AWS Elastic Beanstalk

(D). AWS CodeDeploy

***Answer:*** D

**QUESTION NO: 483**

The release process workflow of an application requires a manual approval before the code is deployed into the production environment.

What is the BEST way to achieve this using AWS CodePipeline?

(A). Use multiple pipelines to allow approval

(B). Use an approval action in a stage

(C). Disable the stage transition to allow manual approval

(D). Disable a stage just prior the deployment stage

***Answer:*** B

**QUESTION NO: 484**

What is the format of structured notification messages sent by Amazon SNS?

(A). An XML object containing MessageId, UnsubscribeURL, Subject, Message and other values

(B). An JSON object containing MessageId, DuplicateFlag, Message and other values

(C). An XML object containing MessageId, DuplicateFlag, Message and other values

(D). An JSON object containing MessageId, unsubscribeURL, Subject, Message and other values

***Answer:*** D

Explanation

https://docs.aws.amazon.com/sns/latest/dg/sns-message-and-json-formats.html#httpnotification-json

**QUESTION NO: 485**

A developer is building an application that needs to store date in Amazon S3. Management requires that the data be encrypted before is it sent to Amazon S3 for storage. The encryption keys need to be managed by the security team.

Which approach should the developer take to meet these requirements?

(A). Implement server-side encryption using customer-provided encryption keys (SSE-C). (B). Implement server-side encryption by using client-side master key.

(C). Implement client-side encryption using an AWS KMS managed customer master key (CMK).

(D). Implement Client-side encryption using Amazon S3 managed keys.

***Answer:*** C

Reference: <https://aws.amazon.com/s3/faqs/>

https://docs.aws.amazon.com/AmazonS3/latest/userguide/UsingClientSideEncryption.html

**QUESTION NO: 486**

A company stores all personally identifiable information (Pll) in an Amazon DynamoDB table named Pll in Account A.

An application running on Amazon EC2 instances in Account B requires access to the Pll table.

An administrator in Account A created an IAM role named AccessPII with privileges to access the Pll table and made Account B a trusted entity.

Which combination of additional steps should developers take to access the table1? (Select TWO )

(A). Ask an administrator in Account B to allow the EC2 IAM role permission to assume the

AccessPII role

(B). Ask an administrator in Account B to allow the EC2 IAM role permission to assume the

AccessPII role with predefined service control policies

(C). Ask an administrator in Account A to allow the EC2 IAM role permission to assume the

AccessPII role with predefined service control policies

(D). Include the AssumeRole API in the application code logic to obtain credentials to access the Pll table.

(E). Include the Gets ess ionToken API in the application code logic to obtain credentials to access the Pll table

***Answer:*** A,D

**QUESTION NO: 487**

An IAM role is attached to an Amazon EC2 instance that explicitly denies access to all Amazon S3 API actions. The EC2 instance credentials file specifies the IAM access key and secret access key, which allow full administrative access.

Given that multiple modes of IAM access are present for this EC2 instance, which of the following is correct?

(A). The EC2 instance will only be able to list the S3 buckets

(B). The EC2 instance will only be able to list the contents of one S3 bucket at a time

(C). The EC2 instance will be able to perform all actions on any S3 bucket

(D). The EC2 instance will not be able to perform any S3 action on any S3 bucket.

***Answer:*** C

**QUESTION NO: 488**

A company has a large number of documents that are stored securely in Amazon S3 The company is creating an application that occasionally will read these documents The application will be deployed on Amazon EC2 instances.

The company's security requirements mandate that no long-term credentials can be stored on the EC2 instances and that only the needed documents can be accessed Only authorized users and applications can access the documents, access must be logged by Amazon S3 and each document must follow S3 Lifecycle policies for archival and destruction What should a developer do to meet these requirements?

(A). Create an event to invoke an AWS Lambda function when a document is uploaded

Configure the function to write the documents to an Amazon Elastic File System (Amazon EFS) file system Configure the EC2 instances to mount the EFS file system Configure the application to access the documents that are stored in the file system as needed

(B). Create a user that has programmatic credentials, and attach a policy that allows read access to the S3 bucket Use the AWS CLI to configure those credentials for the EC2 instances to use Create an Amazon Machine Image (AMI) and add the access key and secret access key to the user data section to create environment variables Use the AMI to launch each EC2 instance that runs the application. Add application code to use the keys that are stored in the environment variables to access the S3 bucket objects as needed. (C). Modify the S3 bucket, make the bucket public, and make each object public Add application code to make REST calls to access the objects in the S3 bucket as needed

(D). Create an 1AM role with permissions to read objects from Amazon S3 Attach the role to the EC2 instances as an instance profile Add application code to access the objects in the S3 bucket as needed

***Answer:*** D

**QUESTION NO: 489**

After launching an instance that you intend to serve as a NAT (Network Address Translation) device in a public subnet you modify your route tables to have the NAT device be the target of internet bound traffic of your private subnet. When you try and make an outbound connection to the Internet from an instance in the private subnet, you are not successful.

Which of the following steps could resolve the issue?

(A). Attaching a second Elastic Network interface (ENI) to the NAT instance, and placing it in the private subnet

(B). Attaching a second Elastic Network Interface (ENI) to the instance in the private subnet, and placing it in the public subnet

(C). Disabling the Source/Destination Check attribute on the NAT instance

(D). Attaching an Elastic IP address to the instance in the private subnet

***Answer:*** C

Explanation https://docs.aws.amazon.com/vpc/latest/userguide/VPC\_NAT\_Instance.html#NATInstance

**QUESTION NO: 490**

NA

**QUESTION NO: 491**

A Developer is storing sensitive documents in Amazon S3 that will require encryption at rest.

The encryption keys must be rotated annually, at least.

What is the easiest way to achieve this?

(A). Encrypt the data before sending it to Amazon S3

(B). Import a custom key into AWS KMS with annual rotation enabled

(C). Use AWS KMS with automatic key rotation

(D). Export a key from AWS KMS to encrypt the data

***Answer:*** C

Explanation

https://docs.aws.amazon.com/kms/latest/developerguide/rotate-keys.html

https://docs.aws.amazon.com/kms/latest/developerguide/custom-key-store-overview.html You can use the same techniques to view and manage the CMKs in your custom key store that you use for CMKs in the AWS KMS key store. You can control access with IAM and key policies, create tags and aliases, enable and disable the CMKs, and schedule key deletion. You can use the CMKs for cryptographic operations and use them with AWS services that integrate with AWS KMS. However, you cannot enable automatic key rotation and you cannot import key material into a CMK in a custom key store.

Q: Can I rotate my keys? Yes. You can choose to have AWS KMS automatically rotate CMKs every year, provided that those keys were generated within AWS KMS HSMs. Automatic key rotation is not supported for imported keys, asymmetric keys, or keys generated in an AWS CloudHSM cluster using the AWS KMS custom key store feature. If you choose to import keys to AWS KMS or asymmetric keys or use a custom key store, you can manually rotate them by creating a new CMK and mapping an existing key alias from the old CMK to the new CMK. https://aws.amazon.com/kms/faqs/

**QUESTION NO: 492**

A corporate web application is deployed within an Amazon VPC, and is connected to the corporate data center via IPSec VPN. The application must authenticate against the onpremise LDAP server. Once authenticated, logged-in users can only access an S3 keyspace specific to the user.

Which two approaches can satisfy the objectives? Choose 2

Answers

(A). The application authenticates against LDAP. The application then calls the IAM Security Service to login to IAM using the LDAP credentials. The application can use the IAM temporary credentials to access the appropriate S3 bucket.

(B). The application authenticates against LDAP, and retrieves the name of an IAM role associated with the user. The application then calls the IAM Security Token Service to assume that IAM Role. The application can use the temporary credentials to access the appropriate S3 bucket.

(C). The application authenticates against IAM Security Token Service using the LDAP credentials. The application uses those temporary AWS security credentials to access the appropriate S3 bucket.

(D). Develop an identity broker which authenticates against LDAP, and then calls IAM Security Token Service to get IAM federated user credentials. The application calls the identity broker to get IAM federated user credentials with access to the appropriate S3 bucket.

(E). Develop an identity broker which authenticates against IAM Security Token Service to assume an IAM Role to get temporary AWS security credentials. The application calls the identity broker to get AWS temporary security credentials with access to the appropriate S3 bucket.

***Answer:*** B,D Explanation https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_credentials\_temp\_request.html

**QUESTION NO: 493**

The upload of a 15 GB object to Amazon S3 fails. The error message reads: "Your proposed upload exceeds the maximum allowed object size." What technique will allow the Developer to upload this object?

(A). Upload the object using the multi-part upload API.

(B). Upload the object over an AWS Direct Connect connection.

(C). Contact AWS Support to increase the object size limit. (D). Upload the object to another AWS region.

***Answer:*** A Explanation https://docs.aws.amazon.com/AmazonS3/latest/dev/UploadingObjects.html

**QUESTION NO: 494**

What item operation allows the retrieval of multiple items from a DynamoDB table in a single API call?

(A). GetItem

(B). BatchGetItem

(C). GetMultipleItems

(D). GetItemRange

***Answer:*** B Explanation

https://docs.aws.amazon.com/amazondynamodb/latest/APIReference/API\_BatchGetItem.ht ml

**QUESTION NO: 495**

A website's page load times are gradually increasing as more users access the system at the same time.

Analysis indicates that a user profile is being loaded from a database in all the web pages being visited by each user and this is increasing the database load and the page load latency. To address this issue the Developer decides to cache the user profile data.

Which caching strategy will address this situation MOST efficiently?

(A). Create a new Amazon EC2 Instance and run a NoSQL database on it. Cache the profile data within this database using the write-through caching strategy.

(B). Create an Amazon ElastiCache cluster to cache the user profile data. Use a cache-aside caching strategy.

(C). Use a dedicated Amazon RDS instance for caching profile data. Use a write-through caching strategy.

(D). Create an ElastiCache cluster to cache the user profile data. Use a write-through caching strategy.

***Answer:*** B Explanation https://docs.aws.amazon.com/AmazonElastiCache/latest/mem-ug/Strategies.html

**QUESTION NO: 496**

A Developer is going to deploy an AWS Lambda function that requires significant CPU utilization. Which approach will MINIMIZE the average runtime of the function?

(A). Deploy the function into multiple AWS Regions

(B). Deploy the function into multiple Availability Zones

(C). Deploy the function using Lambda layers

(D). Deploy the function with its memory allocation set to the maximum amount

***Answer:*** D

**QUESTION NO: 497**

NA

**QUESTION NO: 498**

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

***Answer:*** B

Explanation

<https://docs.amplify.aws/cli/#key-capabilities>

https://aws.amazon.com/amplify/faqs/

**QUESTION NO: 499**

A developer has written a serverless application and wants to deploy it to AWS Lambda to leverage the function's multi-threaded execution to improve performance. Which action should the developer take to achieve these requirements?

(A). increase the Lambda function execution timeout (B). Use unreserved account concurrency.

(C). Increase the memory allocation of the Lambda function

(D). Set the reserved concurrency of the Lambda function to a higher number

***Answer:*** C

**QUESTION NO: 500**

An application uses Amazon DynamoDB as its backend database The application experiences sudden spikes in traffic over the weekend and variable but predictable spikes during weekdays The capacity needs to be set to avoid throttling errors at all times How can this be accomplished cost-effectively?

(A). Use provisioned capacity with AWS Auto Scaling throughout the week.

(B). Use on-demand capacity for the weekend and provisioned capacity with AWS Auto

Scaling during the weekdays

(C). Use on-demand capacity throughout the week

(D). Use provisioned capacity with AWS Auto Scaling enabled during the weekend and reserved capacity enabled during the weekdays

***Answer:*** A

**QUESTION NO: 501**

A company uses a third-party tool to build, bundle, and package rts applications on-premises. and store them locally The company uses Amazon EC2 instances to run its front-end applications How can an application be deployed from the source control system onto the EC2 instances?

(A). Use AWS CodeDeploy and point it to the local storage to directly deploy a bundle m a zip. tar. or tar.gz format

(B). Upload the bundle to an Amazon S3 bucket and specify the S3 location when doing a deployment using AWS CodeDeploy

(C). Create a repository using AWS CodeCommit to automatically trigger a deployment to the

EC2 instances

(D). Use AWS CodeBuild to automatically deploy the latest build to the latest EC2 instances

***Answer:*** B

**QUESTION NO: 502**

Which of the following are valid SNS delivery transports? Choose 2

Answers

(A). HTTP

(B). UDP

(C). SMS

(D). DynamoDB

(E). Named Pipes

***Answer:*** A, C Explanation

https://aws.amazon.com/sns/faqs/

Q: What are the different delivery formats/transports for receiving notifications? In order for customers to have broad flexibility of delivery mechanisms, Amazon SNS supports notifications over multiple transport protocols. Customers can select one the following transports as part of the subscription requests:

"HTTP", "HTTPS" - Subscribers specify a URL as part of the subscription registration; notifications will be delivered through an HTTP POST to the specified URL.

"Email", "Email-JSON" - Messages are sent to registered addresses as email. Email-JSON sends notifications as a JSON object, while Email sends text-based email.

"SQS" - Users can specify an SQS standard queue as the endpoint; Amazon SNS will enqueue a notification message to the specified queue (which subscribers can then process using SQS APIs such as ReceiveMessage, DeleteMessage, etc.). Note that FIFO queues are not currently supported.

"SMS" - Messages are sent to registered phone numbers as SMS text messages.

**QUESTION NO: 503**

A Developer has created a Lambda function and is finding that the function is taking longer to complete than expected. After some debugging, the Developer has discovered that increasing compute capacity would improve performance.

How can the Developer increase the Lambda compute resources?

(A). Run on a larger instance size with more compute capacity.

(B). Increase the maximum execution time.

(C). Specify a larger compute capacity when calling the Lambda function. (D). Increase the allocated memory for the Lambda function.

***Answer:*** D

**A Developer is working on an application that handles 10MB documents that contain highly-sensitive data.  
The application will use AWS KMS(**Key Management Service **) to perform client-side encryption.  
What steps must be followed?**

**A.** Invoke the Encrypt API passing the plaintext data that must be encrypted, then reference the customer managed key ARN in the KeyId parameter

**B.** Invoke the GenerateRandom API to get a data encryption key, then use the data encryption key to encrypt the data

**C.** Invoke the GenerateDataKey API to retrieve the encrypted version of the data encryption key to encrypt the data

**D.** Invoke the GenerateDataKey API to retrieve the plaintext version of the data encryption key to encrypt the data

**Correct Answer: D**

Explanation  
https://docs.aws.amazon.com/AmazonS3/latest/dev/UsingClientSideEncryption.html GenerateDataKey API: Generates a unique data key. This operation returns a plaintext copy of the data key and a copy that is encrypted under a customer master key (CMK) that you specify. You can use the plaintext key to encrypt your data outside of KMS and store the encrypted data key with the encrypted data.

**A company's ecommerce website is experiencing massive traffic spikes, which are causing performance problems in the company database. Users are reporting that accessing the website takes a long time A developer wants to implement a caching layer using Amazon ElastiCache. The website is required to be responsive no matter which product a user views, and the updates to product information and prices must be strongly consistent**

**A.** Write to the cache directly and sync the backend at a later time.

**B.** Write to the backend first and wait for the cache to expire.

**C.** Write to the backend first and invalidate the cache

**D.** Write to the cache and the backend at the same time

**E.** Which cache writing policy will satisfy these requirements?

**Correct Answer: C**

**What is the format of structured notification messages sent by Amazon SNS(**Simple Notification Service)**?**

**A.** An XML object containing MessageId, UnsubscribeURL, Subject, Message and other values

**B.** An JSON object containing MessageId, DuplicateFlag, Message and other values

**C.** An XML object containing MessageId, DuplicateFlag, Message and other values

**D.** An JSON object containing MessageId, unsubscribeURL, Subject, Message and other values

**Correct Answer: D**

Explanation  
https://docs.aws.amazon.com/sns/latest/dg/sns-message-and-json-formats.html#http-notification-json

**Which of the following statements about SQS (**Simple Queue Service**)is true?**

**A.** Messages will be delivered exactly once and messages will be delivered in First in, First out order

**B.** Messages will be delivered exactly once and message delivery order is indeterminate

**C.** Messages will be delivered one or more times and messages will be delivered in First in, First out order

**D.** Messages will be delivered one or more times and message delivery order is indeterminate

**Correct Answer: D**

Explanation  
https://aws.amazon.com/sqs/features/

**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 the applications.  
How should the Developer identify and troubleshoot the root cause of the performance issues in production?**

**A.** Add logging statements to the Lambda functions, then use Amazon CloudWatch to view the logs.

**B.** Use AWS Cloud Trail and then examine the logs

**C.** Use AWS X-Ray, then examine the segments and errors

**D.** Run Amazon Inspector agents and then analyze performance

**Correct Answer: C**

Explanation  
https://aws.amazon.com/blogs/developer/new-analyze-and-debug-distributed-applications-interactively-using-aw

**developer has launched an application that calls an API by way of Amazon API Gateway. It offers information that changes several times a day but is not updated in real time. The application has become so popular that the API endpoint is overloaded and that traffic to the endpoint must be reduced.  
What can the developer do to address the performance issues?**

**A.** Enable an Auto Scaling group on the endpoint service and database.

**B.** Enable API caching in Amazon ElastiCache.

**C.** Create an additional API Gateway and use an Application Load Balancer

**Correct Answer: B**

**An application is using Amazon DynamoDB as its data store, and should be able to read 100 items per second as strongly consistent reads. Each item is 5 KB in size.  
To what value should the table's provisioned read throughput be set?**

**A.** 200 read capacity units

**B.** 50 read capacity units

**C.** 500 read capacity unitsc

**D.** 100 read capacity units

**Correct Answer: A**

**An ecommerce startup is preparing for an annual sales event As the traffic to the company's application increases, the development team wants to be notified when the Amazon EC2 instance's CPU utilization exceeds 80%.  
Which solution will meet this requirement?**

**A.** Create a cron job on the EC2 instance that executes the --describe-instance-information command on the host instance every 15 minutes and sends the results to an Amazon SNS topic

**B.** Create an AWS Lambda function that queries the AWS CloudTrail logs for the CPUUtihzation metric every 15 minutes and sends a notification to an Amazon SNS topic when the CPU utilization exceeds  
80%

**C.** Create a custom Amazon CloudWatch alarm that sends a notification to an Amazon SNS topic when the CPU utilization exceeds 80%.

**D.** Create a custom AWS CloudTrail alarm that sends a notification to an Amazon SNS topic when the CPU utilization exceeds 80%

**Correct Answer: A**

**A Developer is migrating existing applications to AWS. These applications use MongoDB as their primary data store, and they will be deployed to Amazon EC2 instances. Management requires that the Developer minimize changes to applications while using AWS services Which solution should the Developer use to host MongoDB in AWS?**

**A.** Deploy Amazon DocumentDB in MongoDB compatibility mode

**B.** Replicate the existing MongoDB workload to Amazon DynamoDB

**C.** Install MongoDB on the same instance where the application is running

**D.** Use Amazon API Gateway to translate API calls from MongoDB to Amazon DynamoDB.

**Correct Answer: B**

**A current architecture uses many Lambda functions invoking one another as a large state machine. The coordination of this state machine is legacy custom code that breaks easily.  
Which AWS Service can help refactor and manage the state machine?**

**A.** AWS Data Pipeline

**B.** AWS SNS with AWS SQS

**C.** Amazon Elastic MapReduce

**D.** AWS Step Functions

**Correct Answer: D**

Explanation  
<https://aws.amazon.com/step-functions/>

**A Developer is developing an application that manages financial transactions. To improve security, multi-factor authentication (MFA) will be required as part of the login protocol.  
What services can the Developer use to meet these requirements?**

**A.** Amazon DynamoDB to store MFA session data, and Amazon SNS to send MFA codes

**B.** Amazon Cognito with MFA

**C.** AWS Directory Service

**D.** AWS IAM with MFA enabled

**Correct Answer: B**

Explanation  
AWS documentation - Cognito MFA Managing Security  
You can add multi-factor authentication (MFA) to a user pool to protect the identity of your users. MFA adds a second authentication method that doesn't rely solely on user name and password. You can choose to use SMS text messages, or time-based one-time (TOTP) passwords as second factors in signing in your users. You can also use adaptive authentication with its risk-based model to predict when you might need another authentication factor. It's part of the user pool advanced security features, which also include protections against compromised credentials.

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**A company is developing a report executed by AWS Step Functions Amazon CloudWatch shows errors in the Step Functions task state machine To troubleshoot each task, the state input needs to be included along with the error message in the state output.  
Which coding practice can preserve both the original input and the error for the state?**

**A.** Use ResultPath in a Catch statement to include the error with the original input

**B.** Use inputPath in a Catch statement and set the value to null.

**C.** Use ErrorEquals in a Retry statement to include the error with the original input

**D.** Use OutputPath in a Retry statement and set the value to $.

**Correct Answer: A**

Explanation  
Use ResultPath in a Catch to include the error with the original input.

**A developer is planning to use an Amazon API Gateway and AWS Lambda to provide a REST API The developer will have three distinct environments to manage development, test, and production. How should the application be deployed while minimizing the number of resources to manage?**

**A.** Create one API Gateway with multiple stages with one Lambda function with multiple aliases.

**B.** Assign a Region for each environment and deploy API Gateway and Lambda to each Region

**C.** Create a separate API Gateway and separate Lambda function for each environment in the same Region

**D.** Create one API Gateway and one Lambda function, and use a REST parameter to identify tne environment.

**Correct Answer: A**

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**n application running on an Amazon Linux EC2 instance needs to manage the AWS infrastructure.  
How can the EC2 instance be configured to make AWS API calls securely?**

**A.** Run the aws configure AWS CLI command and specify the access key id and secret access key.

**B.** Sign the AWS CLI command using the signature version 4 process.

**C.** Specify a role for the EC2 instance with the necessary privileges.

**D.** Pass the access key id and secret access key as parameters for each AWS CLI command.

**Correct Answer: C**

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**What item operation allows the retrieval of multiple items from a DynamoDB table in a single API call?**

**A.** GetItem

**B.** BatchGetItem

**C.** GetMultipleItems

**D.** GetItemRange

**Correct Answer: B**

**A developer is implementing authentication and authorization for an application. The developer needs to ensure that the user credentials are never exposed. Which approach should the developer take to meet this requirement?**

**A.** Store the user credentials In Amazon RDS Enable the encryption option for the Amazon RDS D8 instances Build an API using AWS Lambda to validate the credentials and authorize users

**B.** Deploy a custom authentication and authorization API on an Amazon EC2 instance. Store the user credentials in Amazon S3 and encrypt the credentials using Amazon S3 server-side encryption.

**C.** Store the user credentials In Amazon DynamoDB Build an AWS Lambda function to validate the credentials and authorize users

**D.** Use Amazon Cognito to configure a user pool, and use the Cognito API to authenticate and authorize the user

**Correct Answer: C**

**A developer wants to ensure the Amazon EC2 instances in AWS Elastic Beanstalk execute a certain set of commands before the application is ready to use Which Elastic Beanstalk feature will allow the developer to accomplish this?**

**A.** ebextensions

**B.** Immutable update

**C.** Rolling update

**D.** User data

**Correct Answer: A**

**AWS CodeBuild builds code for an application, creates the Docker image, pushes the image to Amazon Elastic Container Registry (Amazon ECR), and tags the image with a unique identifier.  
If the Developers already have AWS CLI configured on their workstations, how can the Docker images be pulled to the workstations?**

**A.** Run the following:docker pull REPOSITORY URI : TAG

**B.** Run the output of the following:aws ecr get-loginand then run:docker pull REPOSITORY URI : TAG

**C.** Run the following:aws ecr get-loginand then run:docker pull REPOSITORY URI : TAG

**D.** Run the output of the following:aws ecr get-download-url-for-layerand then run:docker pull REPOSITORY URI : TAG

**Correct Answer: B**

**When a Simple Queue Service message triggers a task that takes 5 minutes to complete, which process below will result in successful processing of the message and remove it from the queue while minimizing the chances of duplicate processing?**

**A.** Retrieve the message with an increased visibility timeout, process the message, delete the message from the queue

**B.** Retrieve the message with an increased visibility timeout, delete the message from the queue, process the message

**C.** Retrieve the message with increased DelaySeconds, process the message, delete the message from the queue

**D.** Retrieve the message with increased DelaySeconds, delete the message from the queue, process the message

**Correct Answer: A**

Explanation  
https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqs-visibility-timeout.html

**Games-R-Us is launching a new game app for mobile devices. Users will log into the game using their existing Facebook account and the game will record player data and scoring information directly to a DynamoDB table.  
What is the most secure approach for signing requests to the DynamoDB API?**

**A.** Establish cross account access between the mobile app and the DynamoDB table to sign the requests

**B.** Distribute the AWS root account access credentials with the mobile app to sign the requests

**C.** Request temporary security credentials using web identity federation to sign the requests

**D.** Create an IAM user with access credentials that are distributed with the mobile app to sign the requests

**Correct Answer: C**

**Your application is trying to upload a 6 GB file to Simple Storage Service and receive a "Your proposed upload exceeds the maximum allowed object size." error message.  
What is a possible solution for this?**

**A.** None, Simple Storage Service objects are limited to 5 GB

**B.** Use the multi-part upload API for this object

**C.** Use the large object upload API for this object

**D.** Contact support to increase your object size limit

**E.** Upload to a different region

**Correct Answer: B**

Explanation  
https://docs.aws.amazon.com/AmazonS3/latest/dev/mpuoverview.html

**According to best practice, how should access keys be managed in AWS? (Choose two.)**

**A.** Use Amazon IAM roles instead of access keys where possible.

**B.** Embed and encrypt access keys in code for continuous deployment.

**C.** Delete all access keys for the account root user.

**D.** Leave unused access keys in the account for tracking purposes.

**E.** Use the same access key in all applications for consistency.

**Correct Answer: A,C**

**A developer is building an application that runs behind an application Load Balancer (ALB). The application is configured as the origin for an Amazon CloudFront distribution. Users will log in to the application using their social media accounts.  
How can the developer authenticate and authorize users?**

**A.** Configure Cloudfront to use Amazon Cognito as one of the authentication providers

**B.** Authorize the users by calling the Amazon Cognito API in the AWS Lambda authorizer on the ALB

**C.** Validate the user by inspecting the tokens using AWS Lambda authorizers on the ALB

**D.** Configure the ALB to use Amazon Cognito as one of the authentication providers

**Correct Answer: A**

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**D.** Configure the ALB to use Amazon Cognito as one of the authentication providers

**Correct Answer: A**

**A corporate web application is deployed within an Amazon VPC, and is connected to the corporate data center via IPSec VPN. The application must authenticate against the on-premise LDAP server. Once authenticated, logged-in users can only access an S3 keyspace specific to the user.  
Which two approaches can satisfy the objectives? Choose 2 answers**

**A.** The application authenticates against LDAP. The application then calls the IAM Security Service to login to IAM using the LDAP credentials. The application can use the IAM temporary credentials to access the appropriate S3 bucket.

**B.** The application authenticates against LDAP, and retrieves the name of an IAM role associated with the user. The application then calls the IAM Security Token Service to assume that IAM Role. The application can use the temporary credentials to access the appropriate S3 bucket.

**C.** The application authenticates against IAM Security Token Service using the LDAP credentials. The application uses those temporary AWS security credentials to access the appropriate S3 bucket.

**D.** Develop an identity broker which authenticates against LDAP, and then calls IAM Security Token Service to get IAM federated user credentials. The application calls the identity broker to get IAM federated user credentials with access to the appropriate S3 bucket.

**E.** Develop an identity broker which authenticates against IAM Security Token Service to assume an IAM Role to get temporary AWS security credentials. The application calls the identity broker to get AWS temporary security credentials with access to the appropriate S3 bucket.

**Correct Answer: B,D**

Explanation  
https://docs.aws.amazon.com/IAM/latest/UserGuide/id\_credentials\_temp\_request.html

**A company developed a set of APIs that are being served through the Amazon API Gateway. The API calls need to be authenticated based on OpenID identity providers such as Amazon or Facebook. The APIs should allow access based on a custom authorization model.  
Which is the simplest and MOST secure design to use to build an authentication and authorization model for the APIs?**

**A.** Use Amazon Cognito user pools and a custom authorizer to authenticate and authorize users based on JSON Web Tokens.

**B.** Store user credentials in Amazon DynamoDB and have the application retrieve temporary credentials from AWS STS. Make API calls by passing user credentials to the APIs for authentication and authorization.

**C.** Build a OpenID token broker with Amazon and Facebook. Users will authenticate with these identify providers and pass the JSON Web Token to the API to authenticate each API call.

**D.** Use Amazon RDS to store user credentials and pass them to the APIs for authentications and authorization.

**Correct Answer: A**

**A company is running an application built on AWS Lambda functions. One Lambda function has performance issues when it has to download a 50MB file from the Internet in every execution. This function is called multiple times a second.  
What solution would give the BEST performance increase?**

**A.** Cache the file in the /tmp directory

**B.** Increase the Lambda maximum execution time

**C.** Put an Elastic Load Balancer in front of the Lambda function

**D.** Cache the file in Amazon S3

**Correct Answer: A**

Explanation  
https://docs.aws.amazon.com/lambda/latest/dg/runtimes-context.html