

Amazon-Web-Services

Exam Questions SAA-C03

AWS Certified Solutions Architect - Associate (SAA-C03)



NEW QUESTION 1

- (Exam Topic 1)

An application development team is designing a microservice that will convert large images to smaller, compressed images. When a user uploads an image through the web interface, the microservice should store the image in an Amazon S3 bucket, process and compress the image with an AWS Lambda function, and store the image in its compressed form in a different S3 bucket.

A solutions architect needs to design a solution that uses durable, stateless components to process the images automatically.

Which combination of actions will meet these requirements? (Choose two.)

- A. Create an Amazon Simple Queue Service (Amazon SQS) queue Configure the S3 bucket to send a notification to the SQS queue when an image is uploaded to the S3 bucket
- B. Configure the Lambda function to use the Amazon Simple Queue Service (Amazon SQS) queue as the invocation source When the SQS message is successfully processed, delete the message in the queue
- C. Configure the Lambda function to monitor the S3 bucket for new uploads When an uploaded image is detected write the file name to a text file in memory and use the text file to keep track of the images that were processed
- D. Launch an Amazon EC2 instance to monitor an Amazon Simple Queue Service (Amazon SQS) queue When items are added to the queue log the file name in a text file on the EC2 instance and invoke the Lambda function
- E. Configure an Amazon EventBridge (Amazon CloudWatch Events) event to monitor the S3 bucket When an image is uploaded
- F. Send an alert to an Amazon Simple Notification Service (Amazon SNS) topic with the application owner's email address for further processing

Answer: AB

Explanation:

➤ Creating an Amazon Simple Queue Service (SQS) queue and configuring the S3 bucket to send a notification to the SQS queue when an image is uploaded to the S3 bucket will ensure that the Lambda function is triggered in a stateless and durable manner.

➤ Configuring the Lambda function to use the SQS queue as the invocation source, and deleting the message in the queue after it is successfully processed will ensure that the Lambda function processes the image in a stateless and durable manner.

Amazon SQS is a fully managed message queuing service that enables you to decouple and scale microservices, distributed systems, and serverless applications. SQS eliminates the complexity and overhead associated with managing and operating message-oriented middleware, and empowers developers to focus on differentiating work. When new images are uploaded to the S3 bucket, SQS will trigger the Lambda function to process the image and compress it. Once the image is processed, the SQS message is deleted, ensuring that the Lambda function is stateless and durable.

NEW QUESTION 2

- (Exam Topic 1)

A company has created an image analysis application in which users can upload photos and add photo frames to their images. The users upload images and metadata to indicate which photo frames they want to add to their images. The application uses a single Amazon EC2 instance and Amazon DynamoDB to store the metadata.

The application is becoming more popular, and the number of users is increasing. The company expects the number of concurrent users to vary significantly depending on the time of day and day of week. The company must ensure that the application can scale to meet the needs of the growing user base. Which solution meets these requirements?

- A. Use AWS Lambda to process the photo
- B. Store the photos and metadata in DynamoDB.
- C. Use Amazon Kinesis Data Firehose to process the photos and to store the photos and metadata.
- D. Use AWS Lambda to process the photo
- E. Store the photos in Amazon S3. Retain DynamoDB to store the metadata.
- F. Increase the number of EC2 instances to three
- G. Use Provisioned IOPS SSD (io2) Amazon Elastic Block Store (Amazon EBS) volumes to store the photos and metadata.

Answer: C

NEW QUESTION 3

- (Exam Topic 1)

A company performs monthly maintenance on its AWS infrastructure. During these maintenance activities, the company needs to rotate the credentials for its Amazon ROS for MySQL databases across multiple AWS Regions

Which solution will meet these requirements with the LEAST operational overhead?

- A. Store the credentials as secrets in AWS Secrets Manager
- B. Use multi-Region secret replication for the required Regions Configure Secrets Manager to rotate the secrets on a schedule
- C. Store the credentials as secrets in AWS Systems Manager by creating a secure string parameter Use multi-Region secret replication for the required Regions Configure Systems Manager to rotate the secrets on a schedule
- D. Store the credentials in an Amazon S3 bucket that has server-side encryption (SSE) enabled Use Amazon EventBridge (Amazon CloudWatch Events) to invoke an AWS Lambda function to rotate the credentials
- E. Encrypt the credentials as secrets by using AWS Key Management Service (AWS KMS) multi-Region customer managed keys Store the secrets in an Amazon DynamoDB global table Use an AWS Lambda function to retrieve the secrets from DynamoDB Use the RDS API to rotate the secrets.

Answer: A

Explanation:

<https://aws.amazon.com/blogs/security/how-to-replicate-secrets-aws-secrets-manager-multiple-regions/>

NEW QUESTION 4

- (Exam Topic 1)

A solutions architect is designing a new hybrid architecture to extend a company's on-premises infrastructure to AWS. The company requires a highly available connection with consistent low latency to an AWS Region. The company needs to minimize costs and is willing to accept slower traffic if the primary connection fails.

What should the solutions architect do to meet these requirements?

- A. Provision an AWS Direct Connect connection to a Region Provision a VPN connection as a backup if the primary Direct Connect connection fails.
- B. Provision a VPN tunnel connection to a Region for private connectivity
- C. Provision a second VPN tunnel for private connectivity and as a backup if the primary VPN connection fails.
- D. Provision an AWS Direct Connect connection to a Region Provision a second Direct Connect connection to the same Region as a backup if the primary Direct Connect connection fails.
- E. Provision an AWS Direct Connect connection to a Region Use the Direct Connect failover attribute from the AWS CLI to automatically create a backup connection if the primary Direct Connect connection fails.

Answer: A

Explanation:

"In some cases, this connection alone is not enough. It is always better to guarantee a fallback connection as the backup of DX. There are several options, but implementing it with an AWS Site-To-Site VPN is a real cost-effective solution that can be exploited to reduce costs or, in the meantime, wait for the setup of a second DX."

<https://www.proud2becloud.com/hybrid-cloud-networking-backup-aws-direct-connect-network-connection-with>

NEW QUESTION 5

- (Exam Topic 1)

A company has an automobile sales website that stores its listings in a database on Amazon RDS When an automobile is sold the listing needs to be removed from the website and the data must be sent to multiple target systems. Which design should a solutions architect recommend?

- A. Create an AWS Lambda function triggered when the database on Amazon RDS is updated to send the information to an Amazon Simple Queue Service (Amazon SQS) queue for the targets to consume
- B. Create an AWS Lambda function triggered when the database on Amazon RDS is updated to send the information to an Amazon Simple Queue Service (Amazon SQS) FIFO queue for the targets to consume
- C. Subscribe to an RDS event notification and send an Amazon Simple Queue Service (Amazon SQS) queue fanned out to multiple Amazon Simple Notification Service (Amazon SNS) topics Use AWS Lambda functions to update the targets
- D. Subscribe to an RDS event notification and send an Amazon Simple Notification Service (Amazon SNS) topic fanned out to multiple Amazon Simple Queue Service (Amazon SQS) queues Use AWS Lambda functions to update the targets

Answer: D

Explanation:

<https://docs.aws.amazon.com/lambda/latest/dg/services-rds.html> <https://docs.aws.amazon.com/lambda/latest/dg/with-sns.html>

NEW QUESTION 6

- (Exam Topic 1)

A company is storing backup files by using Amazon S3 Standard storage. The files are accessed frequently for 1 month. However, the files are not accessed after 1 month. The company must keep the files indefinitely.

Which storage solution will meet these requirements MOST cost-effectively?

- A. Configure S3 Intelligent-Tiering to automatically migrate objects.
- B. Create an S3 Lifecycle configuration to transition objects from S3 Standard to S3 Glacier Deep Archive after 1 month.
- C. Create an S3 Lifecycle configuration to transition objects from S3 Standard to S3 Standard-Infrequent Access (S3 Standard-IA) after 1 month.
- D. Create an S3 Lifecycle configuration to transition objects from S3 Standard to S3 One Zone-Infrequent Access (S3 One Zone-IA) after 1 month.

Answer: B

NEW QUESTION 7

- (Exam Topic 1)

A company recently migrated to AWS and wants to implement a solution to protect the traffic that flows in and out of the production VPC. The company had an inspection server in its on-premises data center. The inspection server performed specific operations such as traffic flow inspection and traffic filtering. The company wants to have the same functionalities in the AWS Cloud.

Which solution will meet these requirements?

- A. Use Amazon GuardDuty for traffic inspection and traffic filtering in the production VPC
- B. Use Traffic Mirroring to mirror traffic from the production VPC for traffic inspection and filtering.
- C. Use AWS Network Firewall to create the required rules for traffic inspection and traffic filtering for the production VPC.
- D. Use AWS Firewall Manager to create the required rules for traffic inspection and traffic filtering for the production VPC.

Answer: C

Explanation:

AWS Network Firewall supports both inspection and filtering as required

NEW QUESTION 8

- (Exam Topic 1)

A company's dynamic website is hosted using on-premises servers in the United States. The company is launching its product in Europe, and it wants to optimize site loading times for new European users. The site's backend must remain in the United States. The product is being launched in a few days, and an immediate solution is needed.

What should the solutions architect recommend?

- A. Launch an Amazon EC2 instance in us-east-1 and migrate the site to it.
- B. Move the website to Amazon S3. Use cross-Region replication between Regions.
- C. Use Amazon CloudFront with a custom origin pointing to the on-premises servers.
- D. Use an Amazon Route 53 geo-proximity routing policy pointing to on-premises servers.

Answer: C

Explanation:

<https://aws.amazon.com/pt/blogs/aws/amazon-cloudfront-support-for-custom-origins/>

You can now create a CloudFront distribution using a custom origin. Each distribution will can point to an S3 or to a custom origin. This could be another storage service, or it could be something more interesting and more dynamic, such as an EC2 instance or even an Elastic Load Balancer

NEW QUESTION 9

- (Exam Topic 1)

A company wants to run its critical applications in containers to meet requirements for scalability and availability. The company prefers to focus on maintenance of the critical applications. The company does not want to be responsible for provisioning and managing the underlying infrastructure that runs the containerized workload.

What should a solutions architect do to meet those requirements?

- A. Use Amazon EC2 Instances, and Install Docker on the Instances
- B. Use Amazon Elastic Container Service (Amazon ECS) on Amazon EC2 worker nodes
- C. Use Amazon Elastic Container Service (Amazon ECS) on AWS Fargate
- D. Use Amazon EC2 instances from an Amazon Elastic Container Service (Amazon ECS)-optimized Amazon Machine Image (AMI).

Answer: C

Explanation:

using AWS ECS on AWS Fargate since they requirements are for scalability and availability without having to provision and manage the underlying infrastructure to run the containerized workload. <https://docs.aws.amazon.com/AmazonECS/latest/userguide/what-is-fargate.html>

NEW QUESTION 10

- (Exam Topic 1)

A company is running an SMB file server in its data center. The file server stores large files that are accessed frequently for the first few days after the files are created. After 7 days the files are rarely accessed.

The total data size is increasing and is close to the company's total storage capacity. A solutions architect must increase the company's available storage space without losing low-latency access to the most recently accessed files. The solutions architect must also provide file lifecycle management to avoid future storage issues.

Which solution will meet these requirements?

- A. Use AWS DataSync to copy data that is older than 7 days from the SMB file server to AWS.
- B. Create an Amazon S3 File Gateway to extend the company's storage space.
- C. Create an S3 Lifecycle policy to transition the data to S3 Glacier Deep Archive after 7 days.
- D. Create an Amazon FSx for Windows File Server file system to extend the company's storage space.
- E. Install a utility on each user's computer to access Amazon S3. Create an S3 Lifecycle policy to transition the data to S3 Glacier Flexible Retrieval after 7 days.

Answer: A

NEW QUESTION 10

- (Exam Topic 1)

A development team runs monthly resource-intensive tests on its general purpose Amazon RDS for MySQL DB instance with Performance Insights enabled. The testing lasts for 48 hours once a month and is the only process that uses the database. The team wants to reduce the cost of running the tests without reducing the compute and memory attributes of the DB instance.

Which solution meets these requirements MOST cost-effectively?

- A. Stop the DB instance when tests are complete
- B. Restart the DB instance when required.
- C. Use an Auto Scaling policy with the DB instance to automatically scale when tests are completed.
- D. Create a snapshot when tests are complete
- E. Terminate the DB instance and restore the snapshot when required.
- F. Modify the DB instance to a low-capacity instance when tests are complete
- G. Modify the DB instance again when required.

Answer: A

NEW QUESTION 11

- (Exam Topic 1)

A company runs an online marketplace web application on AWS. The application serves hundreds of thousands of users during peak hours. The company needs a scalable, near-real-time solution to share the details of millions of financial transactions with several other internal applications. Transactions also need to be processed to remove sensitive data before being stored in a document database for low-latency retrieval.

What should a solutions architect recommend to meet these requirements?

- A. Store the transactions data into Amazon DynamoDB. Set up a rule in DynamoDB to remove sensitive data from every transaction upon write. Use DynamoDB Streams to share the transactions data with other applications.
- B. Stream the transactions data into Amazon Kinesis Data Firehose to store data in Amazon DynamoDB and Amazon S3. Use AWS Lambda integration with Kinesis Data Firehose to remove sensitive data.
- C. Other applications can consume the data stored in Amazon S3.
- D. Stream the transactions data into Amazon Kinesis Data Streams. Use AWS Lambda integration to remove sensitive data from every transaction and then store the transactions data in Amazon DynamoDB. Other applications can consume the transactions data off the Kinesis data stream.
- E. Store the batched transactions data in Amazon S3 as file.
- F. Use AWS Lambda to process every file and remove sensitive data before updating the files in Amazon S3. The Lambda function then stores the data in Amazon DynamoDB. Other applications can consume transaction files stored in Amazon S3.

Answer: C

Explanation:

The destination of your Kinesis Data Firehose delivery stream. Kinesis Data Firehose can send data records to various destinations, including Amazon Simple

Storage Service (Amazon S3), Amazon Redshift, Amazon OpenSearch Service, and any HTTP endpoint that is owned by you or any of your third-party service providers. The following are the supported destinations:

- * Amazon OpenSearch Service
- * Amazon S3
- * Datadog
- * Dynatrace
- * Honeycomb
- * HTTP Endpoint
- * Logic Monitor
- * MongoDB Cloud
- * New Relic
- * Splunk

* Sumo Logic <https://docs.aws.amazon.com/firehose/latest/dev/create-name.html> <https://aws.amazon.com/kinesis/data-streams/>

Amazon Kinesis Data Streams (KDS) is a massively scalable and durable real-time data streaming service. KDS can continuously capture gigabytes of data per second from hundreds of thousands of sources such as website clickstreams, database event streams, financial transactions, social media feeds, IT logs, and location-tracking events.

NEW QUESTION 16

- (Exam Topic 1)

A company hosts a data lake on AWS. The data lake consists of data in Amazon S3 and Amazon RDS for PostgreSQL. The company needs a reporting solution that provides data visualization and includes all the data sources within the data lake. Only the company's management team should have full access to all the visualizations. The rest of the company should have only limited access.

Which solution will meet these requirements?

- A. Create an analysis in Amazon QuickSight
- B. Connect all the data sources and create new dataset
- C. Publish dashboards to visualize the data
- D. Share the dashboards with the appropriate IAM roles.
- E. Create an analysis in Amazon QuickSight
- F. Connect all the data sources and create new dataset
- G. Publish dashboards to visualize the data
- H. Share the dashboards with the appropriate users and groups.
- I. Create an AWS Glue table and crawler for the data in Amazon S3. Create an AWS Glue extract, transform, and load (ETL) job to produce report
- J. Publish the reports to Amazon S3. Use S3 bucket policies to limit access to the reports.
- K. Create an AWS Glue table and crawler for the data in Amazon S3. Use Amazon Athena Federated Query to access data within Amazon RDS for PostgreSQL
- L. Generate reports by using Amazon Athena
- M. Publish the reports to Amazon S3. Use S3 bucket policies to limit access to the reports.

Answer: A

NEW QUESTION 18

- (Exam Topic 1)

A company has a production web application in which users upload documents through a web interface or a mobile app. According to a new regulatory requirement, new documents cannot be modified or deleted after they are stored.

What should a solutions architect do to meet this requirement?

- A. Store the uploaded documents in an Amazon S3 bucket with S3 Versioning and S3 Object Lock enabled
- B. Store the uploaded documents in an Amazon S3 bucket
- C. Configure an S3 Lifecycle policy to archive the documents periodically.
- D. Store the uploaded documents in an Amazon S3 bucket with S3 Versioning enabled. Configure an ACL to restrict all access to read-only.
- E. Store the uploaded documents on an Amazon Elastic File System (Amazon EFS) volume
- F. Access the data by mounting the volume in read-only mode.

Answer: A

Explanation:

<https://docs.aws.amazon.com/AmazonS3/latest/userguide/object-lock-overview.html>

NEW QUESTION 23

- (Exam Topic 1)

A company has an application that runs on Amazon EC2 instances and uses an Amazon Aurora database. The EC2 instances connect to the database by using user names and passwords that are stored locally in a file. The company wants to minimize the operational overhead of credential management.

What should a solutions architect do to accomplish this goal?

- A. Use AWS Secrets Manager
- B. Turn on automatic rotation.
- C. Use AWS Systems Manager Parameter Store
- D. Turn on automatic rotation.
- E. Create an Amazon S3 bucket to store objects that are encrypted with an AWS Key Management Service (AWS KMS) encryption key
- F. Migrate the credential file to the S3 bucket
- G. Point the application to the S3 bucket.
- H. Create an encrypted Amazon Elastic Block Store (Amazon EBS) volume (or each EC2 instance)
- I. Attach the new EBS volume to each EC2 instance
- J. Migrate the credential file to the new EBS volume
- L. Point the application to the new EBS volume.

Answer: A

Explanation:

<https://aws.amazon.com/cn/blogs/security/how-to-connect-to-aws-secrets-manager-service-within-a-virtual-private-network/> <https://aws.amazon.com/blogs/security/rotate-amazon-rds-database-credentials-automatically-with-aws-secrets-manager/>

NEW QUESTION 26

- (Exam Topic 1)

A company has an application that generates a large number of files, each approximately 5 MB in size. The files are stored in Amazon S3. Company policy requires the files to be stored for 4 years before they can be deleted. Immediate accessibility is always required as the files contain critical business data that is not easy to reproduce. The files are frequently accessed in the first 30 days of the object creation but are rarely accessed after the first 30 days. Which storage solution is MOST cost-effective?

- A. Create an S3 bucket lifecycle policy to move files from S3 Standard to S3 Glacier 30 days from object creation. Delete the files 4 years after object creation.
- B. Create an S3 bucket lifecycle policy to move files from S3 Standard to S3 One Zone-Infrequent Access (S3 One Zone-IA) 30 days from object creation. Delete the files 4 years after object creation.
- C. Delete the files 4 years after object creation.
- D. Create an S3 bucket lifecycle policy to move files from S3 Standard-Infrequent Access (S3 Standard-IA) 30 days from object creation. Delete the files 4 years after object creation.
- E. Delete the files 4 years after object creation.
- F. Create an S3 bucket lifecycle policy to move files from S3 Standard to S3 Standard-Infrequent Access (S3 Standard-IA) 30 days from object creation. Move the files to S3 Glacier 4 years after object creation.

Answer: B

Explanation:

https://aws.amazon.com/s3/storage-classes/?trk=66264cd8-3b73-416c-9693-ea7cf4fe846a&sc_channel=ps&s_k

NEW QUESTION 27

- (Exam Topic 1)

An application runs on an Amazon EC2 instance in a VPC. The application processes logs that are stored in an Amazon S3 bucket. The EC2 instance needs to access the S3 bucket without connectivity to the internet. Which solution will provide private network connectivity to Amazon S3?

- A. Create a gateway VPC endpoint to the S3 bucket.
- B. Stream the logs to Amazon CloudWatch Log.
- C. Export the logs to the S3 bucket.
- D. Create an instance profile on Amazon EC2 to allow S3 access.
- E. Create an Amazon API Gateway API with a private link to access the S3 endpoint.

Answer: A

Explanation:

VPC endpoint allows you to connect to AWS services using a private network instead of using the public Internet.

NEW QUESTION 30

- (Exam Topic 1)

A company has thousands of edge devices that collectively generate 1 TB of status alerts each day. Each alert is approximately 2 KB in size. A solutions architect needs to implement a solution to ingest and store the alerts for future analysis. The company wants a highly available solution. However, the company needs to minimize costs and does not want to manage additional infrastructure. Additionally, the company wants to keep 14 days of data available for immediate analysis and archive any data older than 14 days. What is the MOST operationally efficient solution that meets these requirements?

- A. Create an Amazon Kinesis Data Firehose delivery stream to ingest the alerts. Configure the Kinesis Data Firehose stream to deliver the alerts to an Amazon S3 bucket. Set up an S3 Lifecycle configuration to transition data to Amazon S3 Glacier after 14 days.
- B. Launch Amazon EC2 instances across two Availability Zones and place them behind an Elastic Load Balancer to ingest the alerts. Create a script on the EC2 instances that will store the alerts in an Amazon S3 bucket. Set up an S3 Lifecycle configuration to transition data to Amazon S3 Glacier after 14 days.
- C. Create an Amazon Kinesis Data Firehose delivery stream to ingest the alerts. Configure the Kinesis Data Firehose stream to deliver the alerts to an Amazon Elasticsearch Service (Amazon ES) cluster. Set up the Amazon ES cluster to take manual snapshots every day and delete data from the cluster that is older than 14 days.
- D. Create an Amazon Simple Queue Service (Amazon SQS) standard queue to ingest the alerts and set the message retention period to 14 days. Configure consumers to poll the SQS queue, check the age of the message, and analyze the message data as needed. If the message is 14 days old, the consumer should copy the message to an Amazon S3 bucket and delete the message from the SQS queue.

Answer: A

Explanation:

<https://aws.amazon.com/kinesis/data-firehose/features/?nc=sn&loc=2#:~:text=into%20Amazon%20S3%2C%20>

NEW QUESTION 34

- (Exam Topic 2)

A solutions architect needs to securely store a database user name and password that an application uses to access an Amazon RDS DB instance. The application that accesses the database runs on an Amazon EC2 instance. The solutions architect wants to create a secure parameter in AWS Systems Manager Parameter Store. What should the solutions architect do to meet this requirement?

- A. Create an IAM role that has read access to the Parameter Store parameter.
- B. Allow Decrypt access to an AWS Key Management Service (AWS KMS) key that is used to encrypt the parameter.
- C. Assign this IAM role to the EC2 instance.
- D. Create an IAM policy that allows read access to the Parameter Store parameter.
- E. Allow Decrypt access to an AWS Key Management Service (AWS KMS) key that is used to encrypt the parameter.
- F. Assign this IAM policy to the EC2 instance.
- G. Create an IAM trust relationship between the Parameter Store parameter and the EC2 instance.

- H. Specify Amazon RDS as a principal in the trust policy.
- I. Create an IAM trust relationship between the DB instance and the EC2 instance.
- J. Specify Systems Manager as a principal in the trust policy.

Answer: B

Explanation:

https://docs.aws.amazon.com/IAM/latest/UserGuide/reference_aws-services-that-work-with-iam.html

NEW QUESTION 35

- (Exam Topic 2)

A company wants to run a gaming application on Amazon EC2 instances that are part of an Auto Scaling group in the AWS Cloud. The application will transmit data by using UDP packets. The company wants to ensure that the application can scale out and in as traffic increases and decreases.

What should a solutions architect do to meet these requirements?

- A. Attach a Network Load Balancer to the Auto Scaling group
- B. Attach an Application Load Balancer to the Auto Scaling group.
- C. Deploy an Amazon Route 53 record set with a weighted policy to route traffic appropriately
- D. Deploy a NAT instance that is configured with port forwarding to the EC2 instances in the Auto Scaling group.

Answer: B

NEW QUESTION 39

- (Exam Topic 2)

An ecommerce company has an order-processing application that uses Amazon API Gateway and an AWS Lambda function. The application stores data in an Amazon Aurora PostgreSQL database. During a recent sales event, a sudden surge in customer orders occurred. Some customers experienced timeouts and the application did not process the orders of those customers. A solutions architect determined that the CPU utilization and memory utilization were high on the database because of a large number of open connections. The solutions architect needs to prevent the timeout errors while making the least possible changes to the application.

Which solution will meet these requirements?

- A. Configure provisioned concurrency for the Lambda function. Modify the database to be a global database in multiple AWS Regions.
- B. Use Amazon RDS Proxy to create a proxy for the database. Modify the Lambda function to use the RDS Proxy endpoint instead of the database endpoint.
- C. Create a read replica for the database in a different AWS Region. Use query string parameters in API Gateway to route traffic to the read replica.
- D. Migrate the data from Aurora PostgreSQL to Amazon DynamoDB by using AWS Database Migration Service (AWS DMS). Modify the Lambda function to use the DynamoDB table.

Answer: D

NEW QUESTION 40

- (Exam Topic 2)

A company wants to direct its users to a backup static error page if the company's primary website is unavailable. The primary website's DNS records are hosted in Amazon Route 53. The domain is pointing to an Application Load Balancer (ALB). The company needs a solution that minimizes changes and infrastructure overhead.

Which solution will meet these requirements?

- A. Update the Route 53 records to use a latency routing policy.
- B. Add a static error page that is hosted in an Amazon S3 bucket to the records so that the traffic is sent to the most responsive endpoints.
- C. Set up a Route 53 active-passive failover configuration.
- D. Direct traffic to a static error page that is hosted in an Amazon S3 bucket when Route 53 health checks determine that the ALB endpoint is unhealthy.
- E. Set up a Route 53 active-active configuration with the ALB and an Amazon EC2 instance that hosts a static error page as endpoint.
- F. Configure Route 53 to send requests to the instance only if the health checks fail for the ALB.
- G. Update the Route 53 records to use a multivalue answer routing policy.
- H. Create a health check.
- I. Direct traffic to the website if the health check passes.
- J. Direct traffic to a static error page that is hosted in Amazon S3 if the health check does not pass.

Answer: B

NEW QUESTION 44

- (Exam Topic 2)

A company is building a web-based application running on Amazon EC2 instances in multiple Availability Zones. The web application will provide access to a repository of text documents totaling about 900 TB in size. The company anticipates that the web application will experience periods of high demand. A solutions architect must ensure that the storage component for the text documents can scale to meet the demand of the application at all times. The company is concerned about the overall cost of the solution.

Which storage solution meets these requirements MOST cost-effectively?

- A. Amazon Elastic Block Store (Amazon EBS)
- B. Amazon Elastic File System (Amazon EFS)
- C. Amazon Elasticsearch Service (Amazon ES)
- D. Amazon S3

Answer: D

Explanation:

Amazon S3 is cheapest and can be accessed from anywhere.

NEW QUESTION 47

- (Exam Topic 2)

A solutions architect must design a solution that uses Amazon CloudFront with an Amazon S3 origin to store a static website. The company's security policy requires that all website traffic be inspected by AWS WAF.

How should the solutions architect comply with these requirements?

- A. Configure an S3 bucket policy to accept requests coming from the AWS WAF Amazon Resource Name (ARN) only.
- B. Configure Amazon CloudFront to forward all incoming requests to AWS WAF before requesting content from the S3 origin.
- C. Configure a security group that allows Amazon CloudFront IP addresses to access Amazon S3 only. Associate AWS WAF to CloudFront.
- D. Configure Amazon CloudFront and Amazon S3 to use an origin access identity (OAI) to restrict access to the S3 bucket.
- E. Enable AWS WAF on the distribution.

Answer: D

Explanation:

<https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/private-content-restricting-access-to-s3>

<https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/distribution-web-aws-waf.html>

NEW QUESTION 48

- (Exam Topic 2)

A company is running an online transaction processing (OLTP) workload on AWS. This workload uses an unencrypted Amazon RDS DB instance in a Multi-AZ deployment. Daily database snapshots are taken from this instance.

What should a solutions architect do to ensure the database and snapshots are always encrypted moving forward?

- A. Encrypt a copy of the latest DB snapshot
- B. Replace existing DB instance by restoring the encrypted snapshot
- C. Create a new encrypted Amazon Elastic Block Store (Amazon EBS) volume and copy the snapshots to it. Enable encryption on the DB instance.
- D. Copy the snapshots and enable encryption using AWS Key Management Service (AWS KMS). Restore encrypted snapshot to an existing DB instance.
- E. Copy the snapshots to an Amazon S3 bucket that is encrypted using server-side encryption with AWS Key Management Service (AWS KMS) managed keys (SSE-KMS).

Answer: A

Explanation:

[https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_RestoreFromSnapshot.html#USER_RestoreUnder "Encrypt unencrypted resources"](https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_RestoreFromSnapshot.html#USER_RestoreUnderEncryptUnencryptedResources)

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSEncryption.html>

NEW QUESTION 53

- (Exam Topic 2)

A company wants to migrate its MySQL database from on-premises to AWS. The company recently experienced a database outage that significantly impacted the business. To ensure this does not happen again, the company wants a reliable database solution on AWS that minimizes data loss and stores every transaction on at least two nodes.

Which solution meets these requirements?

- A. Create an Amazon RDS DB instance with synchronous replication to three nodes in three Availability Zones.
- B. Create an Amazon RDS MySQL DB instance with Multi-AZ functionality enabled to synchronously replicate the data.
- C. Create an Amazon RDS MySQL DB instance and then create a read replica in a separate AWS Region that synchronously replicates the data.
- D. Create an Amazon EC2 instance with a MySQL engine installed that triggers an AWS Lambda function to synchronously replicate the data to an Amazon RDS MySQL DB instance.

Answer: B

Explanation:

Q: What does Amazon RDS manage on my behalf?

Amazon RDS manages the work involved in setting up a relational database: from provisioning the infrastructure capacity you request to installing the database software. Once your database is up and running, Amazon RDS automates common administrative tasks such as performing backups and patching the software that powers your database. With optional Multi-AZ deployments, Amazon RDS also manages synchronous data replication across Availability Zones with automatic failover.

<https://aws.amazon.com/rds/faqs/>

NEW QUESTION 54

- (Exam Topic 2)

A company is planning to move its data to an Amazon S3 bucket. The data must be encrypted when it is stored in the S3 bucket. Additionally, the encryption key must be automatically rotated every year.

Which solution will meet these requirements with the LEAST operational overhead?

- A. Move the data to the S3 bucket.
- B. Use server-side encryption with Amazon S3 managed encryption keys (SSE-S3). Use the built-in key rotation behavior of SSE-S3 encryption keys.
- C. Create an AWS Key Management Service (AWS KMS) customer managed key.
- D. Enable automatic key rotation.
- E. Set the S3 bucket's default encryption behavior to use the customer managed KMS key.
- F. Move the data to the S3 bucket.
- G. Create an AWS Key Management Service (AWS KMS) customer managed key.
- H. Set the S3 bucket's default encryption behavior to use the customer managed KMS key.
- I. Move the data to the S3 bucket.
- J. Manually rotate the KMS key every year.
- K. Encrypt the data with customer key material before moving the data to the S3 bucket.
- L. Create an AWS Key Management Service (AWS KMS) key without key material.
- M. Import the customer key material into the KMS key.
- N. Enable automatic key rotation.

Answer: C

NEW QUESTION 55

- (Exam Topic 2)

A company runs a web-based portal that provides users with global breaking news, local alerts, and weather updates. The portal delivers each user a personalized view by using mixture of static and dynamic content. Content is served over HTTPS through an API server running on an Amazon EC2 instance behind an Application Load Balancer (ALB). The company wants the portal to provide this content to its users across the world as quickly as possible. How should a solutions architect design the application to ensure the LEAST amount of latency for all users?

- A. Deploy the application stack in a single AWS Region
- B. Use Amazon CloudFront to serve all static and dynamic content by specifying the ALB as an origin.
- C. Deploy the application stack in two AWS Region
- D. Use an Amazon Route 53 latency routing policy to serve all content from the ALB in the closest Region.
- E. Deploy the application stack in a single AWS Region
- F. Use Amazon CloudFront to serve the static content
- G. Serve the dynamic content directly from the ALB.
- H. Deploy the application stack in two AWS Region
- I. Use an Amazon Route 53 geolocation routing policy to serve all content from the ALB in the closest Region.

Answer: A

Explanation:

<https://aws.amazon.com/blogs/networking-and-content-delivery/deliver-your-apps-dynamic-content-using-amaz>

NEW QUESTION 58

- (Exam Topic 2)

A company has two applications: a sender application that sends messages with payloads to be processed and a processing application intended to receive the messages with payloads. The company wants to implement an AWS service to handle messages between the two applications. The sender application can send about 1,000 messages each hour. The messages may take up to 2 days to be processed. If the messages fail to process, they must be retained so that they do not impact the processing of any remaining messages. Which solution meets these requirements and is the MOST operationally efficient?

- A. Set up an Amazon EC2 instance running a Redis database
- B. Configure both applications to use the instance
- C. Store, process, and delete the messages, respectively.
- D. Use an Amazon Kinesis data stream to receive the messages from the sender application
- E. Integrate the processing application with the Kinesis Client Library (KCL).
- F. Integrate the sender and processor applications with an Amazon Simple Queue Service (Amazon SQS) queue
- G. Configure a dead-letter queue to collect the messages that failed to process.
- H. Subscribe the processing application to an Amazon Simple Notification Service (Amazon SNS) topic to receive notifications to process
- I. Integrate the sender application to write to the SNS topic.

Answer: C

Explanation:

<https://aws.amazon.com/blogs/compute/building-loosely-coupled-scalable-c-applications-with-amazon-sqs-and->
<https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqs-dead-letter-queues.htm>

NEW QUESTION 59

- (Exam Topic 2)

A company is building a containerized application on premises and decides to move the application to AWS. The application will have thousands of users soon after it is deployed. The company is unsure how to manage the deployment of containers at scale. The company needs to deploy the containerized application in a highly available architecture that minimizes operational overhead. Which solution will meet these requirements?

- A. Store container images in an Amazon Elastic Container Registry (Amazon ECR) repository
- B. Use an Amazon Elastic Container Service (Amazon ECS) cluster with the AWS Fargate launch type to run the container
- C. Use target tracking to scale automatically based on demand.
- D. Store container images in an Amazon Elastic Container Registry (Amazon ECR) repository
- E. Use an Amazon Elastic Container Service (Amazon ECS) cluster with the Amazon EC2 launch type to run the container
- F. Use target tracking to scale automatically based on demand.
- G. Store container images in a repository that runs on an Amazon EC2 instance
- H. Run the containers on EC2 instances that are spread across multiple Availability Zones
- I. Monitor the average CPU utilization in Amazon CloudWatch
- J. Launch new EC2 instances as needed
- K. Create an Amazon EC2 Amazon Machine Image (AMI) that contains the container image. Launch EC2 instances in an Auto Scaling group across multiple Availability Zones
- L. Use an Amazon CloudWatch alarm to scale out EC2 instances when the average CPU utilization threshold is breached.

Answer: A

NEW QUESTION 63

- (Exam Topic 2)

A company is running a multi-tier web application on premises. The web application is containerized and runs on a number of Linux hosts connected to a PostgreSQL database that contains user records. The operational overhead of maintaining the infrastructure and capacity planning is limiting the company's growth. A solutions architect must improve the application's infrastructure. Which combination of actions should the solutions architect take to accomplish this? (Choose two.)

- A. Migrate the PostgreSQL database to Amazon Aurora

- B. Migrate the web application to be hosted on Amazon EC2 instances.
- C. Set up an Amazon CloudFront distribution for the web application content.
- D. Set up Amazon ElastiCache between the web application and the PostgreSQL database.
- E. Migrate the web application to be hosted on AWS Fargate with Amazon Elastic Container Service (Amazon ECS).

Answer: AE

NEW QUESTION 65

- (Exam Topic 2)

A company wants to migrate its on-premises data center to AWS. According to the company's compliance requirements, the company can use only the ap-northeast-3 Region. Company administrators are not permitted to connect VPCs to the internet.

Which solutions will meet these requirements? (Choose two.)

- A. Use AWS Control Tower to implement data residency guardrails to deny internet access and deny access to all AWS Regions except ap-northeast-3.
- B. Use rules in AWS WAF to prevent internet acces
- C. Deny access to all AWS Regions except ap-northeast-3 in the AWS account settings.
- D. Use AWS Organizations to configure service control policies (SCPS) that prevent VPCs from gaining internet acces
- E. Deny access to all AWS Regions except ap-northeast-3.
- F. Create an outbound rule for the network ACL in each VPC to deny all traffic from 0.0.0.0/0. Create an IAM policy for each user to prevent the use of any AWS Region other than ap-northeast-3.
- G. Use AWS Config to activate managed rules to detect and alert for internet gateways and to detect and alert for new resources deployed outside of ap-northeast-3.

Answer: AC

NEW QUESTION 70

- (Exam Topic 2)

A company hosts a website analytics application on a single Amazon EC2 On-Demand Instance. The analytics software is written in PHP and uses a MySQL database. The analytics software, the web server that provides PHP, and the database server are all hosted on the EC2 instance. The application is showing signs of performance degradation during busy times and is presenting 5xx errors. The company needs to make the application scale seamlessly.

Which solution will meet these requirements MOST cost-effectively?

- A. Migrate the database to an Amazon RDS for MySQL DB instanc
- B. Create an AMI of the web applicatio
- C. Use the AMI to launch a second EC2 On-Demand Instanc
- D. Use an Application Load Balancer to distribute the load to each EC2 instance.
- E. Migrate the database to an Amazon RDS for MySQL DB instanc
- F. Create an AMI of the web applicatio
- G. Use the AMI to launch a second EC2 On-Demand Instanc
- H. Use Amazon Route 53 weighted routing to distribute the load across the two EC2 instances.
- I. Migrate the database to an Amazon Aurora MySQL DB instanc
- J. Create an AWS Lambda function to stop the EC2 instance and change the instance typ
- K. Create an Amazon CloudWatch alarm to invoke the Lambda function when CPU utilization surpasses 75%.
- L. Migrate the database to an Amazon Aurora MySQL DB instanc
- M. Create an AMI of the web application. Apply the AMI to a launch templat
- N. Create an Auto Scaling group with the launch template Configure the launch template to use a Spot Flee
- O. Attach an Application Load Balancer to the Auto Scaling group.

Answer: D

NEW QUESTION 71

- (Exam Topic 2)

Organizers for a global event want to put daily reports online as static HTML pages. The pages are expected to generate millions of views from users around the world. The files are stored In an Amazon S3 bucket. A solutions architect has been asked to design an efficient and effective solution.

Which action should the solutions architect take to accomplish this?

- A. Generate presigned URLs for the files.
- B. Use cross-Region replication to all Regions.
- C. Use the geoproximtty feature of Amazon Route 53.
- D. Use Amazon CloudFront with the S3 bucket as its origin.

Answer: D

NEW QUESTION 73

- (Exam Topic 2)

A medical records company is hosting an application on Amazon EC2 instances. The application processes customer data files that are stored on Amazon S3. The EC2 instances are hosted in public subnets. The EC2 instances access Amazon S3 over the internet, but they do not require any other network access.

A new requirement mandates that the network traffic for file transfers take a private route and not be sent over the internet.

Which change to the network architecture should a solutions architect recommend to meet this requirement?

- A. Create a NAT gatewa
- B. Configure the route table for the public subnets to send traffic to Amazon S3 through the NAT gateway.
- C. Configure the security group for the EC2 instances to restrict outbound traffic so that only traffic to the S3 prefix list is permitted.
- D. Move the EC2 instances to private subnet
- E. Create a VPC endpoint for Amazon S3, and link the endpoint to the route table for the private subnets
- F. Remove the internet gateway from the VP
- G. Set up an AWS Direct Connect connection, and route traffic to Amazon S3 over the Direct Connect connection.

Answer: C

NEW QUESTION 77

- (Exam Topic 2)

A company wants to migrate its existing on-premises monolithic application to AWS.

The company wants to keep as much of the front- end code and the backend code as possible. However, the company wants to break the application into smaller applications. A different team will manage each application. The company needs a highly scalable solution that minimizes operational overhead.

Which solution will meet these requirements?

- A. Host the application on AWS Lambda Integrate the application with Amazon API Gateway.
- B. Host the application with AWS Amplif
- C. Connect the application to an Amazon API Gateway API that is integrated with AWS Lambda.
- D. Host the application on Amazon EC2 instance
- E. Set up an Application Load Balancer with EC2 instances in an Auto Scaling group as targets.
- F. Host the application on Amazon Elastic Container Service (Amazon ECS) Set up an Application Load Balancer with Amazon ECS as the target.

Answer: D

Explanation:

<https://aws.amazon.com/blogs/compute/microservice-delivery-with-amazon-ecs-and-application-load-balancers/>

NEW QUESTION 81

- (Exam Topic 2)

A company uses AWS Organizations to create dedicated AWS accounts for each business unit to manage each business unit's account independently upon request. The root email recipient missed a notification that was sent to the root user email address of one account. The company wants to ensure that all future notifications are not missed. Future notifications must be limited to account administrators.

Which solution will meet these requirements?

- A. Configure the company's email server to forward notification email messages that are sent to the AWS account root user email address to all users in the organization.
- B. Configure all AWS account root user email addresses as distribution lists that go to a few administrators who can respond to alert
- C. Configure AWS account alternate contacts in the AWS Organizations console or programmatically.
- D. Configure all AWS account root user email messages to be sent to one administrator who is responsible for monitoring alerts and forwarding those alerts to the appropriate groups.
- E. Configure all existing AWS accounts and all newly created accounts to use the same root user email address
- F. Configure AWS account alternate contacts in the AWS Organizations console or programmatically.

Answer: D

NEW QUESTION 85

- (Exam Topic 2)

A business's backup data totals 700 terabytes (TB) and is kept in network attached storage (NAS) at its data center. This backup data must be available in the event of occasional regulatory inquiries and preserved for a period of seven years. The organization has chosen to relocate its backup data from its on-premises data center to Amazon Web Services (AWS). Within one month, the migration must be completed. The company's public internet connection provides 500 Mbps of dedicated capacity for data transport.

What should a solutions architect do to ensure that data is migrated and stored at the LOWEST possible cost?

- A. Order AWS Snowball devices to transfer the data
- B. Use a lifecycle policy to transition the files to Amazon S3 Glacier Deep Archive.
- C. Deploy a VPN connection between the data center and Amazon VP
- D. Use the AWS CLI to copy the data from on premises to Amazon S3 Glacier.
- E. Provision a 500 Mbps AWS Direct Connect connection and transfer the data to Amazon S3. Use a lifecycle policy to transition the files to Amazon S3 Glacier Deep Archive.
- F. Use AWS DataSync to transfer the data and deploy a DataSync agent on premise
- G. Use the DataSync task to copy files from the on-premises NAS storage to Amazon S3 Glacier.

Answer: A

Explanation:

<https://www.omnicalculator.com/other/data-transfer>

NEW QUESTION 88

- (Exam Topic 2)

A company recently started using Amazon Aurora as the data store for its global ecommerce application When large reports are run developers report that the ecommerce application is performing poorly After reviewing metrics in Amazon CloudWatch, a solutions architect finds that the ReadIOPS and CPUUtilization metrics are spiking when monthly reports run.

What is the MOST cost-effective solution?

- A. Migrate the monthly reporting to Amazon Redshift.
- B. Migrate the monthly reporting to an Aurora Replica
- C. Migrate the Aurora database to a larger instance class
- D. Increase the Provisioned IOPS on the Aurora instance

Answer: B

Explanation:

<https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/Aurora.Replication.html>

#Aurora.Replication.Replicas Aurora Replicas have two main purposes. You can issue queries to them to scale the read operations for your application. You typically do so by connecting to the reader endpoint of the cluster. That way, Aurora can spread the load for read-only connections across as many Aurora Replicas as you have in the cluster. Aurora Replicas also help to increase availability. If the writer instance in a cluster becomes unavailable, Aurora automatically promotes one of the reader instances to take its place as the new writer.

<https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/Aurora.Overview.html>

NEW QUESTION 90

- (Exam Topic 2)

A company runs an application using Amazon ECS. The application creates esi/ed versions of an original image and then makes Amazon S3 API calls to store the resized images in Amazon S3.

How can a solutions architect ensure that the application has permission to access Amazon S3?

- A. Update the S3 role in AWS IAM to allow read/write access from Amazon ECS, and then relaunch the container.
- B. Create an IAM role with S3 permissions, and then specify that role as the taskRoleArn in the task definition.
- C. Create a security group that allows access from Amazon ECS to Amazon S3, and update the launch configuration used by the ECS cluster.
- D. Create an IAM user with S3 permissions, and then relaunch the Amazon EC2 instances for the ECS cluster while logged in as this account.

Answer: B

NEW QUESTION 92

- (Exam Topic 3)

An ecommerce company needs to run a scheduled daily job to aggregate and filter sales records for analytics. The company stores the sales records in an Amazon S3 bucket. Each object can be up to 10 GB in size. Based on the number of sales events, the job can take up to an hour to complete. The CPU and memory usage of the job are constant and are known in advance.

A solutions architect needs to minimize the amount of operational effort that is needed for the job to run. Which solution meets these requirements?

- A. Create an AWS Lambda function that has an Amazon EventBridge notification. Schedule the EventBridge event to run once a day.
- B. Create an AWS Lambda function. Create an Amazon API Gateway HTTP API, and integrate the API with the function. Create an Amazon EventBridge scheduled event that calls the API and invokes the function.
- C. Create an Amazon Elastic Container Service (Amazon ECS) cluster with an AWS Fargate launch type. Create an Amazon EventBridge scheduled event that launches an ECS task on the cluster to run the job.
- D. Create an Amazon Elastic Container Service (Amazon ECS) cluster with an Amazon EC2 launch type and an Auto Scaling group with at least one EC2 instance.
- E. Create an Amazon EventBridge scheduled event that launches an ECS task on the cluster to run the job.

Answer: C

NEW QUESTION 93

- (Exam Topic 3)

A company hosts a marketing website in an on-premises data center. The website consists of static documents and runs on a single server. An administrator updates the website content infrequently and uses an SFTP client to upload new documents.

The company decides to host its website on AWS and to use Amazon CloudFront. The company's solutions architect creates a CloudFront distribution. The solutions architect must design the most cost-effective and resilient architecture for website hosting to serve as the CloudFront origin.

Which solution will meet these requirements?

- A. Create a virtual server by using Amazon Lightsail.
- B. Configure the web server in the Lightsail instance. Upload website content by using an SFTP client.
- C. Create an AWS Auto Scaling group for Amazon EC2 instances.
- D. Use an Application Load Balancer. Upload website content by using an SFTP client.
- E. Create a private Amazon S3 bucket.
- F. Use an S3 bucket policy to allow access from a CloudFront origin access identity (OAI). Upload website content by using the AWS CLI.
- G. Create a public Amazon S3 bucket.
- H. Configure AWS Transfer for SFTP.
- I. Configure the S3 bucket for website hosting.
- J. Upload website content by using the SFTP client.

Answer: C

Explanation:

<https://docs.aws.amazon.com/cli/latest/reference/transfer/describe-server.html>

NEW QUESTION 98

- (Exam Topic 3)

A company runs a web application on Amazon EC2 instances in multiple Availability Zones. The EC2 instances are in private subnets. A solutions architect implements an internet-facing Application Load Balancer (ALB) and specifies the EC2 instances as the target group. However, the internet traffic is not reaching the EC2 instances.

How should the solutions architect reconfigure the architecture to resolve this issue?

- A. Replace the ALB with a Network Load Balance.
- B. Configure a NAT gateway in a public subnet to allow internet traffic.
- C. Move the EC2 instances to public subnet.
- D. Add a rule to the EC2 instances' security groups to allow outbound traffic to 0.0.0.0/0.
- E. Update the route tables for the EC2 instances' subnets to send 0.0.0.0/0 traffic through the internet gateway route.
- F. Add a rule to the EC2 instances' security groups to allow outbound traffic to 0.0.0.0/0.
- G. Create public subnets in each Availability Zone.
- H. Associate the public subnets with the ALB.
- I. Update the route tables for the public subnets with a route to the private subnets.

Answer: D

Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/public-load-balancer-private-ec2/>

NEW QUESTION 102

- (Exam Topic 3)

A company has an AWS Lambda function that needs read access to an Amazon S3 bucket that is located in the same AWS account. Which solution will meet these requirements in the MOST secure manner?

- A. Apply an S3 bucket policy that grants read access to the S3 bucket
- B. Apply an IAM role to the Lambda function. Apply an IAM policy to the role to grant read access to the S3 bucket
- C. Embed an access key and a secret key in the Lambda function's code to grant the required IAM permissions for read access to the S3 bucket
- D. Apply an IAM role to the Lambda function
- E. Apply an IAM policy to the role to grant read access to all S3 buckets in the account

Answer: B

NEW QUESTION 104

- (Exam Topic 3)

A company uses a legacy application to produce data in CSV format. The legacy application stores the output data in Amazon S3. The company is deploying a new commercial off-the-shelf (COTS) application that can perform complex SQL queries to analyze data that is stored in Amazon Redshift and Amazon S3 only. However, the COTS application cannot process the CSV files that the legacy application produces. The company cannot update the legacy application to produce data in another format. The company needs to implement a solution so that the COTS application can use the data that the legacy application produces. Which solution will meet these requirements with the LEAST operational overhead?

- A. Create an AWS Glue extract, transform, and load (ETL) job that runs on a schedule.
- B. Configure the ETL job to process the .CSV files and store the processed data in Amazon Redshift.
- C. Develop a Python script that runs on Amazon EC2 instances to convert the CSV files to SQL files. Invoke the Python script on a cron schedule to store the output files in Amazon S3.
- D. Create an AWS Lambda function and an Amazon DynamoDB table.
- E. Use an S3 event to invoke the Lambda function.
- F. Configure the Lambda function to perform an extract, transform, and load (ETL) job to process the .CSV files and store the processed data in the DynamoDB table.
- G. Use Amazon EventBridge (Amazon CloudWatch Events) to launch an Amazon EMR cluster on a weekly schedule.
- H. Configure the EMR cluster to perform an extract, transform, and load (ETL) job to process the .CSV files and store the processed data in an Amazon Redshift table.
- I. Create an AWS Lambda function and an Amazon DynamoDB table.

Answer: C

Explanation:

According to the Amazon website, Amazon S3 Select is an Amazon S3 feature that enables applications to retrieve only a subset of data from an object. It offers an efficient way to access data stored in Amazon S3 and can significantly improve query performance, save money, and increase the scalability of applications that frequently access data in S3. S3 Select allows applications to retrieve only the data that is needed, instead of the entire object, and supports SQL expressions, CSV, and JSON. Additionally, S3 Select can be used to query objects stored in the S3 Glacier storage class. The exact text from the Amazon website about S3 Select is:

"Amazon S3 Select is an Amazon S3 feature that enables applications to retrieve only a subset of data from an object. It offers an efficient way to access data stored in Amazon S3 and can significantly improve query performance, save money, and increase the scalability of applications that frequently access data in S3. S3 Select allows applications to retrieve only the data that is needed, instead of the entire object, and supports SQL expressions, CSV, and JSON. Additionally, S3 Select can be used to query objects stored in the S3 Glacier storage class."

NEW QUESTION 108

- (Exam Topic 3)

A company has an Amazon S3 data lake that is governed by AWS Lake Formation. The company wants to create a visualization in Amazon QuickSight by joining the data in the data lake with operational data that is stored in an Amazon Aurora MySQL database. The company wants to enforce column-level authorization so that the company's marketing team can access only a subset of columns in the database. Which solution will meet these requirements with the LEAST operational overhead?

- A. Use Amazon EMR to ingest the data directly from the database to the QuickSight SPICE engine. Include only the required columns.
- B. Use AWS Glue Studio to ingest the data from the database to the S3 data lake. Attach an IAM policy to the QuickSight users to enforce column-level access control.
- C. Use Amazon S3 as the data source in QuickSight.
- D. Use AWS Glue Elastic Views to create a materialized view for the database in Amazon S3. Create an S3 bucket policy to enforce column-level access control for the QuickSight users. Use Amazon S3 as the data source in QuickSight.
- E. Use a Lake Formation blueprint to ingest the data from the database to the S3 data lake. Use Lake Formation to enforce column-level access control for the QuickSight users. Use Amazon Athena as the data source in QuickSight.

Answer: D

NEW QUESTION 109

- (Exam Topic 3)

A company is using a centralized AWS account to store log data in various Amazon S3 buckets. A solutions architect needs to ensure that the data is encrypted at rest before the data is uploaded to the S3 buckets. The data also must be encrypted in transit. Which solution meets these requirements?

- A. Use client-side encryption to encrypt the data that is being uploaded to the S3 buckets.
- B. Use server-side encryption to encrypt the data that is being uploaded to the S3 buckets.
- C. Create bucket policies that require the use of server-side encryption with S3 managed encryption keys (SSE-S3) for S3 uploads.
- D. Enable the security option to encrypt the S3 buckets through the use of a default AWS Key Management Service (AWS KMS) key.

Answer: A

NEW QUESTION 112

- (Exam Topic 3)

A company runs a containerized application on a Kubernetes cluster in an on-premises data center. The company is using a MongoDB database for data storage. The company wants to migrate some of these environments to AWS, but no code changes or deployment method changes are possible at this time. The company needs a solution that minimizes operational overhead. Which solution meets these requirements?

- A. Use Amazon Elastic Container Service (Amazon ECS) with Amazon EC2 worker nodes for compute and MongoDB on EC2 for data storage.
- B. Use Amazon Elastic Container Service (Amazon ECS) with AWS Fargate for compute and Amazon DynamoDB for data storage.
- C. Use Amazon Elastic Kubernetes Service (Amazon EKS) with Amazon EC2 worker nodes for compute and Amazon DynamoDB for data storage.
- D. Use Amazon Elastic Kubernetes Service (Amazon EKS) with AWS Fargate for compute and Amazon DocumentDB (with MongoDB compatibility) for data storage.

Answer: D

Explanation:

Amazon DocumentDB (with MongoDB compatibility) is a fast, reliable, and fully managed database service. Amazon DocumentDB makes it easy to set up, operate, and scale MongoDB-compatible databases in the cloud. With Amazon DocumentDB, you can run the same application code and use the same drivers and tools that you use with MongoDB.

<https://docs.aws.amazon.com/documentdb/latest/developerguide/what-is.html>

NEW QUESTION 116

- (Exam Topic 3)

A company needs to provide its employee with secure access to confidential and sensitive files. The company wants to ensure that the files can be accessed only by authorized users. The files must be downloaded securely to the employees' devices.

The files are stored in an on-premises Windows file server. However, due to an increase in remote usage, the file server is out of capacity.

Which solution will meet these requirements?

- A. Migrate the file server to an Amazon EC2 instance in a public subnet.
- B. Configure the security group to limit inbound traffic to the employees' IP addresses.
- C. Migrate the files to an Amazon FSx for Windows File Server file system.
- D. Integrate the Amazon FSx file system with the on-premises Active Directory. Configure AWS Client VPN.
- E. Migrate the files to Amazon S3, and create a private VPC endpoint.
- F. Create a signed URL to allow download.
- G. Migrate the files to Amazon S3, and create a public VPC endpoint. Allow employees to sign on with AWS IAM Identity Center (AWS Single Sign-On).

Answer: C

NEW QUESTION 121

- (Exam Topic 3)

A company hosts multiple production applications. One of the applications consists of resources from Amazon EC2, AWS Lambda, Amazon RDS, Amazon Simple Notification Service (Amazon SNS), and Amazon Simple Queue Service (Amazon SQS) across multiple AWS Regions. All company resources are tagged with a tag name of "application" and a value that corresponds to each application. A solutions architect must provide the quickest solution for identifying all of the tagged components.

Which solution meets these requirements?

- A. Use AWS CloudTrail to generate a list of resources with the application tag.
- B. Use the AWS CLI to query each service across all Regions to report the tagged components.
- C. Run a query in Amazon CloudWatch Logs Insights to report on the components with the application tag.
- D. Run a query with the AWS Resource Groups Tag Editor to report on the resources globally with the application tag.

Answer: D

Explanation:

<https://docs.aws.amazon.com/tag-editor/latest/userguide/tagging.html>

NEW QUESTION 122

- (Exam Topic 3)

A media company hosts its website on AWS. The website application's architecture includes a fleet of Amazon EC2 instances behind an Application Load Balancer (ALB) and a database that is hosted on Amazon Aurora. The company's cyber security team reports that the application is vulnerable to SQL injection.

How should the company resolve this issue?

- A. Use AWS WAF in front of the ALB. Associate the appropriate web ACLs with AWS WAF.
- B. Create an ALB listener rule to reply to SQL injection with a fixed response.
- C. Subscribe to AWS Shield Advanced to block all SQL injection attempts automatically.
- D. Set up Amazon Inspector to block all SQL injection attempts automatically.

Answer: A

NEW QUESTION 125

- (Exam Topic 3)

A company has a serverless website with millions of objects in an Amazon S3 bucket. The company uses the S3 bucket as the origin for an Amazon CloudFront distribution. The company did not set encryption on the S3 bucket before the objects were loaded. A solutions architect needs to enable encryption for all existing objects and for all objects that are added to the S3 bucket in the future.

Which solution will meet these requirements with the LEAST amount of effort?

- A. Create a new S3 bucket.
- B. Turn on the default encryption settings for the new S3 bucket.
- C. Download all existing objects to temporary local storage.
- D. Upload the objects to the new S3 bucket.
- E. Turn on the default encryption settings for the S3 bucket.

- F. Use the S3 Inventory feature to create a .csv file that lists the unencrypted object
- G. Run an S3 Batch Operations job that uses the copy command to encrypt those objects.
- H. Create a new encryption key by using AWS Key Management Service (AWS KMS). Change the settings on the S3 bucket to use server-side encryption with AWS KMS managed encryption keys (SSE-KMS). Turn on versioning for the S3 bucket.
- I. Navigate to Amazon S3 in the AWS Management Console
- J. Browse the S3 bucket's object
- K. Sort by the encryption field
- L. Select each unencrypted object
- M. Use the Modify button to apply default encryption settings to every unencrypted object in the S3 bucket.

Answer: B

Explanation:

<https://spin.atomicobject.com/2020/09/15/aws-s3-encrypt-existing-objects/>

NEW QUESTION 128

- (Exam Topic 3)

A company is building an application that consists of several microservices. The company has decided to use container technologies to deploy its software on AWS. The company needs a solution that minimizes the amount of ongoing effort for maintenance and scaling. The company cannot manage additional infrastructure.

Which combination of actions should a solutions architect take to meet these requirements? (Choose two.)

- A. Deploy an Amazon Elastic Container Service (Amazon ECS) cluster.
- B. Deploy the Kubernetes control plane on Amazon EC2 instances that span multiple Availability Zones.
- C. Deploy an Amazon Elastic Container Service (Amazon ECS) service with an Amazon EC2 launch type. Specify a desired task number level of greater than or equal to 2.
- D. Deploy an Amazon Elastic Container Service (Amazon ECS) service with a Fargate launch type. Specify a desired task number level of greater than or equal to 2.
- E. Deploy Kubernetes worker nodes on Amazon EC2 instances that span multiple Availability Zones. Create a deployment that specifies two or more replicas for each microservice.

Answer: AD

Explanation:

AWS Fargate is a technology that you can use with Amazon ECS to run containers without having to manage servers or clusters of Amazon EC2 instances. With Fargate, you no longer have to provision, configure, or scale clusters of virtual machines to run containers.

<https://docs.aws.amazon.com/AmazonECS/latest/userguide/what-is-fargate.html>

NEW QUESTION 131

- (Exam Topic 3)

A company has an on-premises MySQL database used by the global sales team with infrequent access patterns. The sales team requires the database to have minimal downtime. A database administrator wants to migrate this database to AWS without selecting a particular instance type in anticipation of more users in the future.

Which service should a solutions architect recommend?

- A. Amazon Aurora MySQL
- B. Amazon Aurora Serverless for MySQL
- C. Amazon Redshift Spectrum
- D. Amazon RDS for MySQL

Answer: B

NEW QUESTION 136

- (Exam Topic 3)

A company runs an application that receives data from thousands of geographically dispersed remote devices that use UDP. The application processes the data immediately and sends a message back to the device if necessary. No data is stored.

The company needs a solution that minimizes latency for the data transmission from the devices. The solution also must provide rapid failover to another AWS Region.

Which solution will meet these requirements?

- A. Configure an Amazon Route 53 failover routing policy. Create a Network Load Balancer (NLB) in each of the two Regions. Configure the NLB to invoke an AWS Lambda function to process the data.
- B. Use AWS Global Accelerator. Create a Network Load Balancer (NLB) in each of the two Regions as an endpoint.
- C. Create an Amazon Elastic Container Service (Amazon ECS) cluster with the Fargate launch type. Create an ECS service on the cluster. Set the ECS service as the target for the NLB. Process the data in Amazon ECS.
- D. Use AWS Global Accelerator. Create an Application Load Balancer (ALB) in each of the two Regions as an endpoint. Create an Amazon Elastic Container Service (Amazon ECS) cluster with the Fargate launch type. Create an ECS service on the cluster.
- E. Set the ECS service as the target for the ALB. Process the data in Amazon ECS.
- F. Configure an Amazon Route 53 failover routing policy. Create an Application Load Balancer (ALB) in each of the two Regions. Create an Amazon Elastic Container Service (Amazon ECS) cluster with the Fargate launch type. Create an ECS service on the cluster. Set the ECS service as the target for the ALB. Process the data in Amazon ECS.

Answer: C

NEW QUESTION 140

- (Exam Topic 3)

A company hosts its web application on AWS using seven Amazon EC2 instances. The company requires that the IP addresses of all healthy EC2 instances be returned in response to DNS queries.

Which policy should be used to meet this requirement?

- A. Simple routing policy
- B. Latency routing policy
- C. Multivalue routing policy
- D. Geolocation routing policy

Answer: C

Explanation:

Use a multivalue answer routing policy to help distribute DNS responses across multiple resources. For example, use multivalue answer routing when you want to associate your routing records with a Route 53 health check. For example, use multivalue answer routing when you need to return multiple values for a DNS query and route traffic to multiple IP addresses.

<https://aws.amazon.com/premiumsupport/knowledge-center/multivalue-versus-simple-policies/>

NEW QUESTION 145

- (Exam Topic 3)

A company recently migrated its web application to AWS by rehosting the application on Amazon EC2 instances in a single AWS Region. The company wants to redesign its application architecture to be highly available and fault tolerant. Traffic must reach all running EC2 instances randomly.

Which combination of steps should the company take to meet these requirements? (Choose two.)

- A. Create an Amazon Route 53 failover routing policy.
- B. Create an Amazon Route 53 weighted routing policy.
- C. Create an Amazon Route 53 multivalue answer routing policy.
- D. Launch three EC2 instances: two instances in one Availability Zone and one instance in another Availability Zone.
- E. Launch four EC2 instances: two instances in one Availability Zone and two instances in another Availability Zone.

Answer: CE

Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/multivalue-versus-simple-policies/>

NEW QUESTION 148

- (Exam Topic 3)

A company's web application consists of an Amazon API Gateway API in front of an AWS Lambda function and an Amazon DynamoDB database. The Lambda function

handles the business logic, and the DynamoDB table hosts the data. The application uses Amazon Cognito user pools to identify the individual users of the application. A solutions architect needs to update the application so that only users who have a subscription can access premium content.

- A. Enable API caching and throttling on the API Gateway API
- B. Set up AWS WAF on the API Gateway API Create a rule to filter users who have a subscription
- C. Apply fine-grained IAM permissions to the premium content in the DynamoDB table
- D. Implement API usage plans and API keys to limit the access of users who do not have a subscription.

Answer: C

NEW QUESTION 153

- (Exam Topic 3)

A company will deployed a web application on AWS. The company hosts the backend database on Amazon RDS for MySQL with a primary DB instance and five read replicas to support scaling needs. The read replicas must log no more than 1 second behind the primary DB Instance. The database routinely runs scheduled stored procedures.

As traffic on the website increases, the replicas experiences additional lag during periods of peak load. A solutions architect must reduce the replication lag as much as possible. The solutions architect must minimize changes to the application code and must minimize ongoing overhead.

Which solution will meet these requirements?

Migrate the database to Amazon Aurora MySQL. Replace the read replicas with Aurora Replicas, and configure Aurora Auto Scaling. Replace the stored procedures with Aurora MySQL native functions.

Deploy an Amazon ElastiCache for Redis cluster in front of the database. Modify the application to check the cache before the application queries the database.

Replace the stored procedures with AWS Lambda functions.

- A. Migrate the database to a MySQL database that runs on Amazon EC2 instance
- B. Choose large, compute optimized for all replica node
- C. Maintain the stored procedures on the EC2 instances.
- D. Deploy an Amazon ElastiCache for Redis cluster in front of the database
- E. Modify the application to check the cache before the application queries the database
- F. Replace the stored procedures with AWS Lambda functions.
- G. Migrate the database to a MySQL database that runs on Amazon EC2 instance
- H. Choose large, compute optimized EC2 instances for all replica nodes, Maintain the stored procedures on the EC2 instances.
- I. Migrate the database to Amazon DynamoDB, Provision number of read capacity units (RCUs) to support the required throughput, and configure on-demand capacity scaling
- J. Replace the stored procedures with DynamoDB streams.

Answer: A

NEW QUESTION 158

- (Exam Topic 3)

A company has one million users that use its mobile app. The company must analyze the data usage in near-real time. The company also must encrypt the data in near-real time and must store the data in a centralized location in Apache Parquet format for further processing.

Which solution will meet these requirements with the LEAST operational overhead?

- A. Create an Amazon Kinesis data stream to store the data in Amazon S3. Create an Amazon Kinesis Data Analytics application to analyze the data
- B. Invoke an AWS Lambda function to send the data to the Kinesis Data Analytics application.

- C. Create an Amazon Kinesis data stream to store the data in Amazon S3. Create an Amazon EMR cluster to analyze the data.
- D. Invoke an AWS Lambda function to send the data to the EMR cluster.
- E. Create an Amazon Kinesis Data Firehose delivery stream to store the data in Amazon S3. Create an Amazon EMR cluster to analyze the data.
- F. Create an Amazon Kinesis Data Firehose delivery stream to store the data in Amazon S3. Create an Amazon Kinesis Data Analytics application to analyze the data.

Answer: D

Explanation:

This solution will meet the requirements with the least operational overhead as it uses Amazon Kinesis Data Firehose, which is a fully managed service that can automatically handle the data collection, data transformation, encryption, and data storage in near-real time. Kinesis Data Firehose can automatically store the data in Amazon S3 in Apache Parquet format for further processing. Additionally, it allows you to create an Amazon Kinesis Data Analytics application to analyze the data in near real-time, with no need to manage any infrastructure or invoke any Lambda function. This way you can process a large amount of data with the least operational overhead.

NEW QUESTION 161

- (Exam Topic 3)

A company provides an online service for posting video content and transcoding it for use by any mobile platform. The application architecture uses Amazon Elastic File System (Amazon EFS) Standard to collect and store the videos so that multiple Amazon EC2 Linux instances can access the video content for processing. As the popularity of the service has grown over time, the storage costs have become too expensive.

Which storage solution is MOST cost-effective?

- A. Use AWS Storage Gateway for files to store and process the video content
- B. Use AWS Storage Gateway for volumes to store and process the video content
- C. Use Amazon EFS for storing the video content. Once processing is complete, transfer the files to Amazon Elastic Block Store (Amazon EBS)
- D. Use Amazon S3 for storing the video content. Move the files temporarily over to an Amazon Elastic Block Store (Amazon EBS) volume attached to the server for processing.

Answer: D

NEW QUESTION 162

- (Exam Topic 3)

A company's facility has badge readers at every entrance throughout the building. When badges are scanned, the readers send a message over HTTPS to indicate who attempted to access that particular entrance.

A solutions architect must design a system to process these messages from the sensors. The solution must be highly available, and the results must be made available for the company's security team to analyze.

Which system architecture should the solutions architect recommend?

- A. Launch an Amazon EC2 instance to serve as the HTTPS endpoint and to process the messages. Configure the EC2 instance to save the results to an Amazon S3 bucket.
- B. Create an HTTPS endpoint in Amazon API Gateway.
- C. Configure the API Gateway endpoint to invoke an AWS Lambda function to process the messages and save the results to an Amazon DynamoDB table.
- D. Use Amazon Route 53 to direct incoming sensor messages to an AWS Lambda function.
- E. Configure the Lambda function to process the messages and save the results to an Amazon DynamoDB table.
- F. Create a gateway VPC endpoint for Amazon S3. Configure a Site-to-Site VPN connection from the facility network to the VPC so that sensor data can be written directly to an S3 bucket by way of the VPC endpoint.

Answer: B

NEW QUESTION 164

- (Exam Topic 3)

A company wants to implement a disaster recovery plan for its primary on-premises file storage volume. The file storage volume is mounted from an Internet Small Computer Systems Interface (iSCSI) device on a local storage server. The file storage volume holds hundreds of terabytes (TB) of data.

The company wants to ensure that end users retain immediate access to all file types from the on-premises systems without experiencing latency.

Which solution will meet these requirements with the LEAST amount of change to the company's existing infrastructure?

- A. Provision an Amazon S3 File Gateway as a virtual machine (VM) that is hosted on-premise.
- B. Set the local cache to 10 TB.
- C. Modify existing applications to access the files through the NFS protocol.
- D. To recover from a disaster, provision an Amazon EC2 instance and mount the S3 bucket that contains the files.
- E. Provision an AWS Storage Gateway tape gateway.
- F. Use a data backup solution to back up all existing data to a virtual tape library.
- G. Configure the data backup solution to run nightly after the initial backup is complete.
- H. To recover from a disaster, provision an Amazon EC2 instance and restore the data to an Amazon Elastic Block Store (Amazon EBS) volume from the volumes in the virtual tape library.
- I. Provision an AWS Storage Gateway Volume Gateway cached volume.
- J. Set the local cache to 10 TB.
- K. Mount the Volume Gateway cached volume to the existing file server by using iSCSI.
- L. and copy all files to the storage volume.
- M. Configure scheduled snapshots of the storage volume.
- N. To recover from a disaster, restore a snapshot to an Amazon Elastic Block Store (Amazon EBS) volume and attach the EBS volume to an Amazon EC2 instance.
- O. Provision an AWS Storage Gateway Volume Gateway stored volume with the same amount of disk space as the existing file storage volume.
- P. Mount the Volume Gateway stored volume to the existing file server by using iSCSI, and copy all files to the storage volume.
- Q. Configure scheduled snapshots of the storage volume.
- R. To recover from a disaster, restore a snapshot to an Amazon Elastic Block Store (Amazon EBS) volume and attach the EBS volume to an Amazon EC2 instance.

Answer: C

NEW QUESTION 166

- (Exam Topic 3)

A company sells datasets to customers who do research in artificial intelligence and machine learning (AI/ML). The datasets are large, formatted files that are stored in an Amazon S3 bucket in the us-east-1 Region. The company hosts a web application that the customers use to purchase access to a given dataset. The web application is deployed on multiple Amazon EC2 instances behind an Application Load Balancer. After a purchase is made, customers receive an S3 signed URL that allows access to the files.

The customers are distributed across North America and Europe. The company wants to reduce the cost that is associated with data transfers and wants to maintain or improve performance.

What should a solutions architect do to meet these requirements?

- A. Configure S3 Transfer Acceleration on the existing S3 bucket. Direct customer requests to the S3 Transfer Acceleration endpoint. Continue to use S3 signed URLs for access control.
- B. Deploy an Amazon CloudFront distribution with the existing S3 bucket as the origin. Direct customer requests to the CloudFront URL. Switch to CloudFront signed URLs for access control.
- C. Set up a second S3 bucket in the eu-central-1 Region with S3 Cross-Region Replication between the buckets. Direct customer requests to the closest Region. Continue to use S3 signed URLs for access control.
- D. Modify the web application to enable streaming of the datasets to end user.
- E. Configure the web application to read the data from the existing S3 bucket. Implement access control directly in the application.

Answer: B

Explanation:

<https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/PrivateContent.html>

NEW QUESTION 171

- (Exam Topic 3)

A company has an application that places hundreds of .csv files into an Amazon S3 bucket every hour. The files are 1 GB in size. Each time a file is uploaded, the company needs to convert the file to Apache Parquet format and place the output file into an S3 bucket.

Which solution will meet these requirements with the LEAST operational overhead?

- A. Create an AWS Lambda function to download the .csv files, convert the files to Parquet format, and place the output files in an S3 bucket.
- B. Invoke the Lambda function for each S3 PUT event.
- C. Create an Apache Spark job to read the .csv files, convert the files to Parquet format, and place the output files in an S3 bucket.
- D. Create an AWS Lambda function for each S3 PUT event to invoke the Spark job.
- E. Create an AWS Glue table and an AWS Glue crawler for the S3 bucket where the application places the .csv file.
- F. Schedule an AWS Lambda function to periodically use Amazon Athena to query the AWS Glue table, convert the query results into Parquet format, and place the output files into an S3 bucket.
- G. Create an AWS Glue extract, transform, and load (ETL) job to convert the .csv files to Parquet format and place the output files into an S3 bucket.
- H. Create an AWS Lambda function for each S3 PUT event to invoke the ETL job.

Answer: D

Explanation:

<https://docs.aws.amazon.com/prescriptive-guidance/latest/patterns/three-aws-glue-etl-job-types-for-converting-d>

NEW QUESTION 176

- (Exam Topic 3)

A company needs to migrate a legacy application from an on-premises data center to the AWS Cloud because of hardware capacity constraints. The application runs 24 hours a day, 7 days a week. The application database storage continues to grow over time.

What should a solution architect do to meet these requirements MOST cost-effectively?

- A. Migrate the application layer to Amazon EC2 Spot Instances. Migrate the data storage layer to Amazon S3.
- B. Migrate the application layer to Amazon EC2 Reserved Instances. Migrate the data storage layer to Amazon RDS On-Demand Instances.
- C. Migrate the application layer to Amazon EC2 Reserved instances. Migrate the data storage layer to Amazon Aurora Reserved Instances.
- D. Migrate the application layer to Amazon EC2 On Demand. Migrate the data storage layer to Amazon RDS Reserved instances.

Answer: C

NEW QUESTION 179

- (Exam Topic 3)

A solutions architect is implementing a document review application using an Amazon S3 bucket for storage. The solution must prevent accidental deletion of the documents and ensure that all versions of the documents are available. Users must be able to download, modify, and upload documents.

Which combination of actions should be taken to meet these requirements? (Choose two.)

- A. Enable a read-only bucket ACL.
- B. Enable versioning on the bucket.
- C. Attach an IAM policy to the bucket.
- D. Enable MFA Delete on the bucket.
- E. Encrypt the bucket using AWS KMS.

Answer: BD

NEW QUESTION 184

- (Exam Topic 3)

A solution architect must create a disaster recovery (DR) plan for a high-volume software as a service (SaaS) platform. All data for the platform is stored in an Amazon Aurora MySQL DB cluster.

The DR plan must replicate data to a secondary AWS Region.

Which solution will meet these requirements MOST cost-effectively? Use MySQL binary log replication to an Aurora cluster.

- A. Use MySQL binary log replication to an Aurora cluster in the secondary Region Provision one DB instance for the Aurora cluster in the secondary Region.
- B. Set up an Aurora global database for the DB cluste
- C. When setup is complete, remove the DB instance from the secondary Region.
- D. Use AWS Database Migration Service (AWS QMS) to continuously replicate data to an Aurora cluster in the secondary Region Remove theDB instance from the secondary Region.
- E. Set up an Aurora global database for the DB cluster Specify a minimum of one DB instance in the secondary Region

Answer: D

NEW QUESTION 187

- (Exam Topic 3)

A company is using a content management system that runs on a single Amazon EC2 instance. The EC2 instance contains both the web server and the database software. The company must make its website platform highly available and must enable the website to scale to meet user demand. What should a solutions architect recommend to meet these requirements?

- A. Move the database to Amazon RDS, and enable automatic backup
- B. Manually launch another EC2 instance in the same Availability Zon
- C. Configure an Application Load Balancer in the Availability Zone, and set the two instances as targets.
- D. Migrate the database to an Amazon Aurora instance with a read replica in the same Availability Zone as the existing EC2 instanc
- E. Manually launch another EC2 instance in the same Availability Zone
- F. Configure an Application Load Balancer, and set the two EC2 instances as targets.
- G. Move the database to Amazon Aurora with a read replica in another Availability Zon
- H. Create an Amazon Machine Image (AMI) from the EC2 instanc
- I. Configure an Application Load Balancer in two Availability Zone
- J. Attach an Auto Scaling group that uses the AMI across two Availability Zones.
- K. Move the database to a separate EC2 instance, and schedule backups to Amazon S3. Create an Amazon Machine Image (AMI) from the original EC2 instanc
- L. Configure an Application Load Balancer in two Availability Zone
- M. Attach an Auto Scaling group that uses the AMI across two Availability Zones.

Answer: C

Explanation:

This approach will provide both high availability and scalability for the website platform. By moving the database to Amazon Aurora with a read replica in another availability zone, it will provide a failover option for the database. The use of an Application Load Balancer and an Auto Scaling group across two availability zones allows for automatic scaling of the website to meet increased user demand. Additionally, creating an AMI from the original EC2 instance allows for easy replication of the instance in case of failure.

NEW QUESTION 191

- (Exam Topic 3)

A company is developing a new mobile app. The company must implement proper traffic filtering to protect its Application Load Balancer (ALB) against common application-level attacks, such as cross-site scripting or SQL injection. The company has minimal infrastructure and operational staff. The company needs to reduce its share of the responsibility in managing, updating, and securing servers for its AWS environment. What should a solutions architect recommend to meet these requirements?

- A. Configure AWS WAF rules and associate them with the ALB.
- B. Deploy the application using Amazon S3 with public hosting enabled.
- C. Deploy AWS Shield Advanced and add the ALB as a protected resource.
- D. Create a new ALB that directs traffic to an Amazon EC2 instance running a third-party firewall, which then passes the traffic to the current ALB.

Answer: A

Explanation:

A solutions architect should recommend option A, which is to configure AWS WAF rules and associate them with the ALB. This will allow the company to apply traffic filtering at the application layer, which is necessary for protecting the ALB against common application-level attacks such as cross-site scripting or SQL injection. AWS WAF is a managed service that makes it easy to protect web applications from common web exploits that could affect application availability, compromise security, or consume excessive resources. The company can easily manage and update the rules to ensure the security of its application.

NEW QUESTION 193

- (Exam Topic 3)

A company plans to use Amazon ElastiCache for its multi-tier web application. A solutions architect creates a Cache VPC for the ElastiCache cluster and an App VPC for the application's Amazon EC2 instances. Both VPCs are in the us-east-1 Region.

The solutions architect must implement a solution to provide the application's EC2 instances with access to the ElastiCache cluster.

Which solution will meet these requirements MOST cost-effectively?

- A. Create a peering connection between the VPC
- B. Add a route table entry for the peering connection in both VPC
- C. Configure an inbound rule for the ElastiCache cluster's security group to allow inbound connection from the application's security group.
- D. Create a Transit VP
- E. Update the VPC route tables in the Cache VPC and the App VPC to route traffic through the Transit VP
- F. Configure an inbound rule for the ElastiCache cluster's security group to allow inbound connection from the application's security group.
- G. Create a peering connection between the VPC
- H. Add a route table entry for the peering connection in both VPC
- I. Configure an inbound rule for the peering connection's security group to allow inbound connection from the application's security group.
- J. Create a Transit VP
- K. Update the VPC route tables in the Cache VPC and the App VPC to route traffic through the Transit VP
- L. Configure an inbound rule for the Transit VPC's security group to allow inbound connection from the application's security group.

Answer: A

Explanation:

Creating a peering connection between the VPCs allows the application's EC2 instances to communicate with the ElastiCache cluster directly and efficiently. This is the most cost-effective solution as it does not involve creating additional resources such as a Transit VPC, and it does not incur additional costs for traffic passing through the Transit VPC. Additionally, it is also more secure as it allows you to configure a more restrictive security group rule to allow inbound connection from only the application's security group.

NEW QUESTION 198

- (Exam Topic 3)

A company is running a batch application on Amazon EC2 instances. The application consists of a backend with multiple Amazon RDS databases. The application is causing a high number of leads on the databases. A solutions architect must reduce the number of database reads while ensuring high availability. What should the solutions architect do to meet this requirement?

- A. Add Amazon RDS read replicas
- B. Use Amazon ElastiCache for Redis
- C. Use Amazon Route 53 DNS caching
- D. Use Amazon ElastiCache for Memcached

Answer: A

NEW QUESTION 200

- (Exam Topic 3)

A company has a multi-tier application deployed on several Amazon EC2 instances in an Auto Scaling group. An Amazon RDS for Oracle instance is the application's data layer that uses Oracle-specific

PL/SQL functions. Traffic to the application has been steadily increasing. This is causing the EC2 instances to become overloaded and the RDS instance to run out of storage. The Auto Scaling group does not have any scaling metrics and defines the minimum healthy instance count only. The company predicts that traffic will continue to increase at a steady but unpredictable rate before levelling off.

What should a solutions architect do to ensure the system can automatically scale for the increased traffic? (Select TWO.)

- A. Configure storage Auto Scaling on the RDS for Oracle Instance.
- B. Migrate the database to Amazon Aurora to use Auto Scaling storage.
- C. Configure an alarm on the RDS for Oracle Instance for low free storage space
- D. Configure the Auto Scaling group to use the average CPU as the scaling metric
- E. Configure the Auto Scaling group to use the average free memory as the seeing metric

Answer: AC

NEW QUESTION 204

- (Exam Topic 3)

A company's application runs on AWS. The application stores large documents in an Amazon S3 bucket that uses the S3 Standard-infrequent Access (S3 Standard-IA) storage class. The company will continue paying to store the data but wants to save on its total S3 costs. The company wants authorized external users to have the ability to access the documents in milliseconds.

Which solution will meet these requirements MOST cost-effectively?

- A. Configure the S3 bucket to be a Requester Pays bucket
- B. Change the storage tier to S3 Standard for all existing and future objects.
- C. Turn on S3 Transfer Acceleration for the S3 Docket
- D. Use Amazon CloudFront to handle all the requests to the S3 bucket

Answer: D

NEW QUESTION 205

- (Exam Topic 3)

A solution architect needs to assign a new microservice for a company's application. Clients must be able to call an HTTPS endpoint to reach the microservice. The microservice also must use AWS identity and Access Management (IAM) to authentication calls. The solutions architect will write the logic for this microservice by using a single AWS Lambda function that is written in Go 1.x.

Which solution will deploy the function in the in the MOST operationally efficient way?

- A. Create an Amazon API Gateway REST AP
- B. Configure the method to use the Lambda functio
- C. Enable IAM authentication on the API.
- D. Create a Lambda function URL for the functio
- E. Specify AWS_IAM as the authentication type.
- F. Create an Amazon CloudFront distributio
- G. Deploy the function to Lambda@Edg
- H. Integrate IAM authentication logic into the Lambda@Edge function.
- I. Create an Amazon CloudFront distribuio
- J. Deploy the function to CloudFront Function
- K. Specify AWS_IAM as the authentication type.

Answer: A

NEW QUESTION 208

- (Exam Topic 3)

A company's compliance team needs to move its file shares to AWS. The shares run on a Windows Server SMB file share. A self-managed on-premises Active Directory controls access to the files and folders.

The company wants to use Amazon FSx for Windows File Server as part of the solution. The company must ensure that the on-premises Active Directory groups restrict access to the FSx for Windows File Server SMB compliance shares, folders, and files after the move to AWS. The company has created an FSx for Windows File Server file system.

Which solution will meet these requirements?

- A. Create an Active Directory Connector to connect to the Active Director
- B. Map the Active Directory groups to IAM groups to restrict access.
- C. Assign a tag with a Restrict tag key and a Compliance tag valu
- D. Map the Active Directory groups to IAM groups to restrict access.
- E. Create an IAM service-linked role that is linked directly to FSx for Windows File Server to restrict access.
- F. Join the file system to the Active Directory to restrict access.

Answer: D

Explanation:

Joining the FSx for Windows File Server file system to the on-premises Active Directory will allow the company to use the existing Active Directory groups to restrict access to the file shares, folders, and files after the move to AWS. This option allows the company to continue using their existing access controls and management structure, making the transition to AWS more seamless.

NEW QUESTION 209

- (Exam Topic 3)

A payment processing company records all voice communication with its customers and stores the audio files in an Amazon S3 bucket. The company needs to capture the text from the audio files. The company must remove from the text any personally identifiable information (PII) that belongs to customers. What should a solutions architect do to meet these requirements?

- A. Process the audio files by using Amazon Kinesis Video Stream
- B. Use an AWS Lambda function to scanfor known PII patterns.
- C. When an audio file is uploaded to the S3 bucket, invoke an AWS Lambda function to start an Amazon Textract task to analyze the call recordings.
- D. Configure an Amazon Transcribe transcription job with PII redaction turned o
- E. When an audio file is uploaded to the S3 bucket, invoke an AWS Lambda function to start the transcription jo
- F. Store theoutput in a separate S3 bucket.
- G. Create an Amazon Connect contact flow that ingests the audio files with transcription turned o
- H. Embed an AWS Lambda function to scan for known PII pattern
- I. Use Amazon EventBridge (Amazon CloudWatch Events) to start the contact flow when an audio file is uploaded to the S3 bucket.

Answer: C

NEW QUESTION 210

- (Exam Topic 3)

A hospital is designing a new application that gathers symptoms from patients. The hospital has decided to use Amazon Simple Queue Service (Amazon SQS) and Amazon Simple Notification Service (Amazon SNS) in the architecture.

A solutions architect is reviewing the infrastructure design Data must be encrypted at rest and in transit. Only authorized personnel of the hospital should be able to access the data.

Which combination of steps should the solutions architect take to meet these requirements? (Select TWO.)

- A. Turn on server-side encryption on the SQS components Update the default key policy to restrict key usage to a set of authorized principals.
- B. Turn on server-side encryption on the SNS components by using an AWS Key Management Service (AWS KMS) customer managed key Apply a key policy to restrict key usage to a set of authorized principals.
- C. Turn on encryption on the SNS components Update the default key policy to restrict key usage to a set of authorized principal
- D. Set a condition in the topic pokey to allow only encrypted connections over TLS.
- E. Turn on server-side encryption on the SQS components by using an AWS Key Management Service (AWS KMS) customer managed key Apply a key pokey to restrict key usage to a set of authorized principal
- F. Set a condition in the queue pokey to allow only encrypted connections over TLS.
- G. Turn on server-side encryption on the SNS components by using an AWS Key Management Service (AWS KMS) customer managed ke
- H. Apply an IAM pokey to restrict key usage to a set of authorized principal
- I. Set a condition in the queue pokey to allow only encrypted connections over TLS

Answer: BD

NEW QUESTION 214

- (Exam Topic 3)

A company is deploying a new application on Amazon EC2 instances. The application writes data to Amazon Elastic Block Store (Amazon EBS) volumes. The company needs to ensure that all data that is written to the EBS volumes is encrypted at rest.

Which solution wil meet this requirement?

- A. Create an IAM role that specifies EBS encryptio
- B. Attach the role to the EC2 instances.
- C. Create the EBS volumes as encrypted volumes Attach the EBS volumes to the EC2 instances.
- D. Create an EC2 instance tag that has a key of Encrypt and a value of Tru
- E. Tag all instances that require encryption at the ESS level.
- F. Create an AWS Key Management Service (AWS KMS) key policy that enforces EBS encryption in the account Ensure that the key policy is active.

Answer: B

NEW QUESTION 215

- (Exam Topic 3)

A company hosts a multiplayer gaming application on AWS. The company wants the application to read data with sub-millisecond latency and run one-time queries on historical data.

Which solution will meet these requirements with the LEAST operational overhead?

- A. Use Amazon RDS for data that is frequently accesse
- B. Run a periodic custom script to export the data to an Amazon S3 bucket.
- C. Store the data directly in an Amazon S3 bucke
- D. Implement an S3 Lifecycle policy to move older data to S3 Glacier Deep Archive for long-term storag

- E. Run one-time queries on the data in Amazon S3 by using Amazon Athena
- F. Use Amazon DynamoDB with DynamoDB Accelerator (DAX) for data that is frequently accessed. Export the data to an Amazon S3 bucket by using DynamoDB table export
- G. Run one-time queries on the data in Amazon S3 by using Amazon Athena.
- H. Use Amazon DynamoDB for data that is frequently accessed. Turn on streaming to Amazon Kinesis Data Stream
- I. Use Amazon Kinesis Data Firehose to read the data from Kinesis Data Stream
- J. Store the records in an Amazon S3 bucket.

Answer: C

NEW QUESTION 219

- (Exam Topic 3)

A company stores its data objects in Amazon S3 Standard storage. A solutions architect has found that 75% of the data is rarely accessed after 30 days. The company needs all the data to remain immediately accessible with the same high availability and resiliency, but the company wants to minimize storage costs. Which storage solution will meet these requirements?

- A. Move the data objects to S3 Glacier Deep Archive after 30 days.
- B. Move the data objects to S3 Standard-Infrequent Access (S3 Standard-IA) after 30 days.
- C. Move the data objects to S3 One Zone-Infrequent Access (S3 One Zone-IA) after 30 days.
- D. Move the data objects to S3 One Zone-Infrequent Access (S3 One Zone-IA) immediately.

Answer: B

NEW QUESTION 222

- (Exam Topic 3)

A company is deploying a two-tier web application in a VPC. The web tier is using an Amazon EC2 Auto Scaling group with public subnets that span multiple Availability Zones. The database tier consists of an Amazon RDS for MySQL DB instance in separate private subnets. The web tier requires access to the database to retrieve product information.

The web application is not working as intended. The web application reports that it cannot connect to the database. The database is confirmed to be up and running. All configurations for the network ACLs, Security groups, and route tables are still in their default states.

What should a solutions architect recommend to fix the application?

- A. Add an explicit rule to the private subnet's network ACL to allow traffic from the web tier's EC2 instances.
- B. Add a route in the VPC route table to allow traffic between the web tier's EC2 instances and the database tier.
- C. Deploy the web tier's EC2 instances and the database tier's RDS instance into two separate VPCs
- D. and configure VPC peering.
- E. Add an inbound rule to the security group of the database tier's RDS instance to allow traffic from the web tier's security group.

Answer: D

NEW QUESTION 227

- (Exam Topic 3)

A company runs an application on a large fleet of Amazon EC2 instances. The application reads and writes entries into an Amazon DynamoDB table. The size of the DynamoDB table continuously grows, but the application needs only data from the last 30 days. The company needs a solution that minimizes cost and development effort.

Which solution meets these requirements?

- A. Use an AWS CloudFormation template to deploy the complete solution
- B. Redeploy the CloudFormation stack every 30 days, and delete the original stack.
- C. Use an EC2 instance that runs a monitoring application from AWS Marketplace
- D. Configure the monitoring application to use Amazon DynamoDB Streams to store the timestamp when a new item is created in the table
- E. Use a script that runs on the EC2 instance to delete items that have a timestamp that is older than 30 days.
- F. Configure Amazon DynamoDB Streams to invoke an AWS Lambda function when a new item is created in the table
- G. Configure the Lambda function to delete items in the table that are older than 30 days.
- H. Extend the application to add an attribute that has a value of the current timestamp plus 30 days to each new item that is created in the table
- I. Configure DynamoDB to use the attribute as the TTL attribute.

Answer: D

Explanation:

Amazon DynamoDB Time to Live (TTL) allows you to define a per-item timestamp to determine when an item is no longer needed. Shortly after the date and time of the specified timestamp, DynamoDB deletes the item from your table without consuming any write throughput. TTL is provided at no extra cost as a means to reduce stored data volumes by retaining only the items that remain current for your workload's needs.

TTL is useful if you store items that lose relevance after a specific time. The following are example TTL use cases:

Remove user or sensor data after one year of inactivity in an application.

Archive expired items to an Amazon S3 data lake via Amazon DynamoDB Streams and AWS Lambda. Retain sensitive data for a certain amount of time according to contractual or regulatory obligations. <https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/TTL.html>

NEW QUESTION 230

- (Exam Topic 3)

A solutions architect needs to design a system to store client case files. The files are core company assets and are important. The number of files will grow over time.

The files must be simultaneously accessible from multiple application servers that run on Amazon EC2 instances. The solution must have built-in redundancy.

Which solution meets these requirements?

- A. Amazon Elastic File System (Amazon EFS)
- B. Amazon Elastic Block Store (Amazon EBS)
- C. Amazon S3 Glacier Deep Archive
- D. AWS Backup

Answer: A

Explanation:

Amazon EFS provides a simple, scalable, fully managed file system that can be simultaneously accessed from multiple EC2 instances and provides built-in redundancy. It is optimized for multiple EC2 instances to access the same files, and it is designed to be highly available, durable, and secure. It can scale up to petabytes of data and can handle thousands of concurrent connections, and is a cost-effective solution for storing and accessing large amounts of data.

NEW QUESTION 235

- (Exam Topic 3)

A company runs an internal browser-based application. The application runs on Amazon EC2 instances behind an Application Load Balancer. The instances run in an Amazon EC2 Auto Scaling group across multiple Availability Zones. The Auto Scaling group scales up to 20 instances during work hours but scales down to 2 instances overnight. Staff are complaining that the application is very slow when the day begins although it runs well by mid-morning.

How should the scaling be changed to address the staff complaints and keep costs to a minimum?

- A. Implement a scheduled action that sets the desired capacity to 20 shortly before the office opens.
- B. Implement a step scaling action triggered at a lower CPU threshold, and decrease the cooldown period.
- C. Implement a target tracking action triggered at a lower CPU threshold, and decrease the cooldown period.
- D. Implement a scheduled action that sets the minimum and maximum capacity to 20 shortly before the office opens.

Answer: A

NEW QUESTION 240

- (Exam Topic 3)

A telemarketing company is designing its customer call center functionality on AWS. The company needs a solution that provides multiple speaker recognition and generates transcript files. The company wants to query the transcript files to analyze the business patterns. The transcript files must be stored for 7 years for auditing purposes.

Which solution will meet these requirements?

- A. Use Amazon Recognition for multiple speaker recognition.
- B. Store the transcript files in Amazon S3. Use machine learning models for transcript file analysis.
- C. Use Amazon Transcribe for multiple speaker recognition.
- D. Use Amazon Athena to query transcript file analysis.
- E. Use Amazon Translate for multiple speaker recognition.
- F. Store the transcript files in Amazon Redshift. Use SQL queries for transcript file analysis.
- G. Use Amazon Recognition for multiple speaker recognition.
- H. Store the transcript files in Amazon S3. Use Amazon Textract for transcript file analysis.

Answer: C

NEW QUESTION 245

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