



Amazon-Web-Services

Exam Questions SAA-C03

AWS Certified Solutions Architect - Associate (SAA-C03)

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NEW QUESTION 1

- (Topic 1)

A company hosts a containerized web application on a fleet of on-premises servers that process incoming requests. The number of requests is growing quickly. The on-premises servers cannot handle the increased number of requests. The company wants to move the application to AWS with minimum code changes and minimum development effort.

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

- A. Use AWS Fargate on Amazon Elastic Container Service (Amazon ECS) to run the containerized web application with Service Auto Scaling
- B. Use an Application Load Balancer to distribute the incoming requests.
- C. Use two Amazon EC2 instances to host the containerized web application
- D. Use an Application Load Balancer to distribute the incoming requests
- E. Use AWS Lambda with a new code that uses one of the supported languages
- F. Create multiple Lambda functions to support the load
- G. Use Amazon API Gateway as an entry point to the Lambda functions.
- H. Use a high performance computing (HPC) solution such as AWS ParallelCluster to establish an HPC cluster that can process the incoming requests at the appropriate scale.

Answer: A

Explanation:

AWS Fargate is a serverless compute engine that lets users run containers without having to manage servers or clusters of Amazon EC2 instances¹. Users can use AWS Fargate on Amazon Elastic Container Service (Amazon ECS) to run the containerized web application with Service Auto Scaling. Amazon ECS is a fully managed container orchestration service that supports both Docker and Kubernetes². Service Auto Scaling is a feature that allows users to adjust the desired number of tasks in an ECS service based on CloudWatch metrics, such as CPU utilization or request count³. Users can use AWS Fargate on Amazon ECS to migrate the application to AWS with minimum code changes and minimum development effort, as they only need to package their application in containers and specify the CPU and memory requirements.

Users can also use an Application Load Balancer to distribute the incoming requests. An Application Load Balancer is a load balancer that operates at the application layer and routes traffic to targets based on the content of the request. Users can register their ECS tasks as targets for an Application Load Balancer and configure listener rules to route requests to different target groups based on path or host headers. Users can use an Application Load Balancer to improve the availability and performance of their web application.

NEW QUESTION 2

- (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 3

- (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 4

- (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_kwcid=AL!4422!3!536452716950!p!!g!!aws%20s3%20pricing&ef_id=Cj0KCQjwnbmaBhD-ARIsAGTPcfVHUZN5_BMrzl5zBcaC8KnqpnNZvjbZzqPkH6k7q4JcYO5KFLx0YYgaAm6nEALw_wcB:G:s&s_kwcid=AL!4422!3!536452716950!p!!g!!aws%20s3%20pricing

NEW QUESTION 5

- (Topic 1)

A company hosts its web applications in the AWS Cloud. The company configures Elastic Load Balancers to use certificates that are imported into AWS Certificate Manager (ACM). The company's security team must be notified 30 days before the expiration of each certificate.

What should a solutions architect recommend to meet the requirement?

- A. Add a rule in ACM to publish a custom message to an Amazon Simple Notification Service (Amazon SNS) topic every day beginning 30 days before any certificate will expire.
- B. Create an AWS Config rule that checks for certificates that will expire within 30 days.
- C. Configure Amazon EventBridge (Amazon CloudWatch Events) to invoke a custom alert by way of Amazon Simple Notification Service (Amazon SNS) when AWS Config reports a noncompliant resource.
- D. Use AWS Trusted Advisor to check for certificates that will expire within 30 days.
- E. Create an Amazon CloudWatch alarm that is based on Trusted Advisor metrics for check status changes. Configure the alarm to send a custom alert by way of Amazon Simple Notification Service (Amazon SNS).
- F. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to detect any certificates that will expire within 30 days.
- G. Configure the rule to invoke an AWS Lambda function.
- H. Configure the Lambda function to send a custom alert by way of Amazon Simple Notification Service (Amazon SNS).

Answer: B

Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/acm-certificate-expiration/>

NEW QUESTION 6

- (Topic 1)

A company has an application that ingests incoming messages. These messages are then quickly consumed by dozens of other applications and microservices. The number of messages varies drastically and sometimes spikes as high as 100,000 each second. The company wants to decouple the solution and increase scalability.

Which solution meets these requirements?

- A. Persist the messages to Amazon Kinesis Data Analytics.
- B. All the applications will read and process the messages.
- C. Deploy the application on Amazon EC2 instances in an Auto Scaling group, which scales the number of EC2 instances based on CPU metrics.
- D. Write the messages to Amazon Kinesis Data Streams with a single shard.
- E. All applications will read from the stream and process the messages.
- F. Publish the messages to an Amazon Simple Notification Service (Amazon SNS) topic with one or more Amazon Simple Queue Service (Amazon SQS) subscriptions.
- G. All applications then process the messages from the queues.

Answer: D

Explanation:

<https://aws.amazon.com/sqs/features/>

By routing incoming requests to Amazon SQS, the company can decouple the job requests from the processing instances. This allows them to scale the number of

instances based on the size of the queue, providing more resources when needed. Additionally, using an Auto Scaling group based on the queue size will automatically scale the number of instances up or down depending on the workload. Updating the software to read from the queue will allow it to process the job requests in a more efficient manner, improving the performance of the system.

NEW QUESTION 7

- (Topic 1)

A company has an application that provides marketing services to stores. The services are based on previous purchases by store customers. The stores upload transaction data to the company through SFTP, and the data is processed and analyzed to generate new marketing offers. Some of the files can exceed 200 GB in size.

Recently, the company discovered that some of the stores have uploaded files that contain personally identifiable information (PII) that should not have been included. The company wants administrators to be alerted if PII is shared again. The company also wants to automate remediation.

What should a solutions architect do to meet these requirements with the LEAST development effort?

- A. Use an Amazon S3 bucket as a secure transfer point
- B. Use Amazon Inspector to scan the objects in the bucket
- C. If objects contain PII
- D. trigger an S3 Lifecycle policy to remove the objects that contain PII.
- E. Use an Amazon S3 bucket as a secure transfer point
- F. Use Amazon Macie to scan the objects in the bucket
- G. If objects contain PII
- H. Use Amazon Simple Notification Service (Amazon SNS) to trigger a notification to the administrators to remove the objects that contain PII.
- I. Implement custom scanning algorithms in an AWS Lambda function
- J. Trigger the function when objects are loaded into the bucket
- K. If objects contain PII
- L. use Amazon Simple Notification Service (Amazon SNS) to trigger a notification to the administrators to remove the objects that contain PII.
- M. Implement custom scanning algorithms in an AWS Lambda function
- N. Trigger the function when objects are loaded into the bucket
- O. If objects contain PII
- P. use Amazon Simple Email Service (Amazon SES) to trigger a notification to the administrators and trigger an S3 Lifecycle policy to remove the objects that contain PII.

Answer: B

Explanation:

To meet the requirements of detecting and alerting the administrators when PII is shared and automating remediation with the least development effort, the best approach would be to use Amazon S3 bucket as a secure transfer point and scan the objects in the bucket with Amazon Macie. Amazon Macie is a fully managed data security and data privacy service that uses machine learning and pattern matching to discover and protect sensitive data stored in Amazon S3. It can be used to classify sensitive data, monitor access to sensitive data, and automate remediation actions.

In this scenario, after uploading the files to the Amazon S3 bucket, the objects can be scanned for PII by Amazon Macie, and if it detects any PII, it can trigger an Amazon Simple Notification Service (SNS) notification to alert the administrators to remove the objects containing PII. This approach requires the least development effort, as Amazon Macie already has pre-built data classification rules that can detect PII in various formats. Hence, option B is the correct answer.

References:

? Amazon Macie User Guide: <https://docs.aws.amazon.com/macie/latest/userguide/what-is-macie.html>

? AWS Well-Architected Framework - Security Pillar: <https://docs.aws.amazon.com/wellarchitected/latest/security-pillar/welcome.html>

NEW QUESTION 8

- (Topic 1)

A company has an on-premises application that generates a large amount of time-sensitive data that is backed up to Amazon S3. The application has grown and there are user complaints about internet bandwidth limitations. A solutions architect needs to design a long-term solution that allows for both timely backups to Amazon S3 and with minimal impact on internet connectivity for internal users.

Which solution meets these requirements?

- A. Establish AWS VPN connections and proxy all traffic through a VPC gateway endpoint
- B. Establish a new AWS Direct Connect connection and direct backup traffic through this new connection.
- C. Order daily AWS Snowball devices Load the data onto the Snowball devices and return the devices to AWS each day.
- D. Submit a support ticket through the AWS Management Console Request the removal of S3 service limits from the account.

Answer: B

Explanation:

To address the issue of bandwidth limitations on the company's on-premises application, and to minimize the impact on internal user connectivity, a new AWS Direct Connect connection should be established to direct backup traffic through this new connection. This solution will offer a secure, high-speed connection between the company's data center and AWS, which will allow the company to transfer data quickly without consuming internet bandwidth.

Reference:

AWS Direct Connect documentation: <https://aws.amazon.com/directconnect/>

NEW QUESTION 9

- (Topic 1)

A company has a three-tier web application that is deployed on AWS. The web servers are

deployed in a public subnet in a VPC. The application servers and database servers are deployed in private subnets in the same VPC. The company has deployed a third-party virtual firewall appliance from AWS Marketplace in an inspection VPC. The appliance is configured with an IP interface that can accept IP packets.

A solutions architect needs to integrate the web application with the appliance to inspect all traffic to the application before the traffic reaches the web server.

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

- A. Create a Network Load Balancer in the public subnet of the application's VPC to route the traffic to the appliance for packet inspection
- B. Create an Application Load Balancer in the public subnet of the application's VPC to route the traffic to the appliance for packet inspection
- C. Deploy a transit gateway in the inspection VPC Configure route tables to route the incoming packets through the transit gateway
- D. Deploy a Gateway Load Balancer in the inspection VPC Create a Gateway Load Balancer endpoint to receive the incoming packets and forward the packets to the appliance

Answer: D

Explanation:

<https://aws.amazon.com/blogs/networking-and-content-delivery/scaling-network-traffic-inspection-using-aws-gateway-load-balancer/>

NEW QUESTION 10

- (Topic 1)

A global company hosts its web application on Amazon EC2 instances behind an Application Load Balancer (ALB). The web application has static data and dynamic data. The company stores its static data in an Amazon S3 bucket. The company wants to improve performance and reduce latency for the static data and dynamic data. The company is using its own domain name registered with Amazon Route 53.

What should a solutions architect do to meet these requirements?

- A. Create an Amazon CloudFront distribution that has the S3 bucket and the ALB as origins Configure Route 53 to route traffic to the CloudFront distribution.
- B. Create an Amazon CloudFront distribution that has the ALB as an origin Create an AWS Global Accelerator standard accelerator that has the S3 bucket as an endpoint
- C. Configure Route 53 to route traffic to the CloudFront distribution.
- D. Create an Amazon CloudFront distribution that has the S3 bucket as an origin Create an AWS Global Accelerator standard accelerator that has the ALB and the CloudFront distribution as endpoints Create a custom domain name that points to the accelerator DNS name Use the custom domain name as an endpoint for the web application.
- E. Create an Amazon CloudFront distribution that has the ALB as an origin
- F. Create an AWS Global Accelerator standard accelerator that has the S3 bucket as an endpoint Create two domain name
- G. Point one domain name to the CloudFront DNS name for dynamic content, Point the other domain name to the accelerator DNS name for static content Use the domain names as endpoints for the web application.

Answer: C

Explanation:

Static content can be cached at Cloud front Edge locations from S3 and dynamic content EC2 behind the ALB whose performance can be improved by Global Accelerator whose one endpoint is ALB and other Cloud front. So with regards to custom domain name endpoint is web application is R53 alias records for the custom domain point to web application <https://aws.amazon.com/blogs/networking-and-content-delivery/improving-availability-and-performance-for-application-load-balancers-using-one-click-integration-with-aws-global-accelerator/>

NEW QUESTION 10

- (Topic 1)

A company stores call transcript files on a monthly basis. Users access the files randomly within 1 year of the call, but users access the files infrequently after 1 year. The company wants to optimize its solution by giving users the ability to query and retrieve files that are less than 1-year-old as quickly as possible. A delay in retrieving older files is acceptable.

Which solution will meet these requirements MOST cost-effectively?

- A. Store individual files with tags in Amazon S3 Glacier Instant Retrieval
- B. Query the tags to retrieve the files from S3 Glacier Instant Retrieval.
- C. Store individual files in Amazon S3 Intelligent-Tiering
- D. Use S3 Lifecycle policies to move the files to S3 Glacier Flexible Retrieval after 1 year
- E. Query and retrieve the files that are in Amazon S3 by using Amazon Athena
- F. Query and retrieve the files that are in S3 Glacier by using S3 Glacier Select.
- G. Store individual files with tags in Amazon S3 Standard storage
- H. Store search metadata for each archive in Amazon S3 Standard storage
- I. Use S3 Lifecycle policies to move the files to S3 Glacier Instant Retrieval after 1 year
- J. Query and retrieve the files by searching for metadata from Amazon S3.
- K. Store individual files in Amazon S3 Standard storage
- L. Use S3 Lifecycle policies to move the files to S3 Glacier Deep Archive after 1 year
- M. Store search metadata in Amazon Redshift
- N. Query the files from Amazon Redshift
- O. Retrieve the files from S3 Glacier Deep Archive.

Answer: B

Explanation:

"For archive data that needs immediate access, such as medical images, news media assets, or genomics data, choose the S3 Glacier Instant Retrieval storage class, an archive storage class that delivers the lowest cost storage with milliseconds retrieval. For archive data that does not require immediate access but needs the flexibility to retrieve large sets of data at no cost, such as backup or disaster recovery use cases, choose S3 Glacier Flexible Retrieval (formerly S3 Glacier), with retrieval in minutes or free bulk retrievals in 5- 12 hours." <https://aws.amazon.com/about-aws/whats-new/2021/11/amazon-s3-glacier-instant-retrieval-storage-class/>

NEW QUESTION 11

- (Topic 1)

A company is implementing a new business application. The application runs on two Amazon EC2 instances and uses an Amazon S3 bucket for document storage. A solutions architect needs to ensure that the EC2 instances can access the S3 bucket.

What should the solutions architect do to meet this requirement?

- A. Create an IAM role that grants access to the S3 bucket
- B. Attach the role to the EC2 instances.
- C. Create an IAM policy that grants access to the S3 bucket
- D. Attach the policy to the EC2 instances.
- E. Create an IAM group that grants access to the S3 bucket
- F. Attach the group to the EC2 instances.
- G. Create an IAM user that grants access to the S3 bucket
- H. Attach the user account to the EC2 instances.

Answer: A

Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/ec2-instance-access-s3-bucket/>

NEW QUESTION 16

- (Topic 1)

A company uses NFS to store large video files in on-premises network attached storage. Each video file ranges in size from 1MB to 500 GB. The total storage is 70 TB and is no longer growing. The company decides to migrate the video files to Amazon S3. The company must migrate the video files as soon as possible while using the least possible network bandwidth.

Which solution will meet these requirements?

- A. Create an S3 bucket Create an IAM role that has permissions to write to the S3 bucket
- B. Use the AWS CLI to copy all files locally to the S3 bucket.
- C. Create an AWS Snowball Edge job
- D. Receive a Snowball Edge device on premise
- E. Use the Snowball Edge client to transfer data to the device
- F. Return the device so that AWS can import the data into Amazon S3.
- G. Deploy an S3 File Gateway on premise
- H. Create a public service endpoint to connect to the S3 File Gateway Create an S3 bucket Create a new NFS file share on the S3 File Gateway Point the new file share to the S3 bucket
- I. Transfer the data from the existing NFS file share to the S3 File Gateway.
- J. Set up an AWS Direct Connect connection between the on-premises network and AWS
- K. Deploy an S3 File Gateway on premise
- L. Create a public virtual interface (VIF) to connect to the S3 File Gateway
- M. Create an S3 bucket
- N. Create a new NFS file share on the S3 File Gateway
- O. Point the new file share to the S3 bucket
- P. Transfer the data from the existing NFS file share to the S3 File Gateway.

Answer: B

Explanation:

The basic difference between Snowball and Snowball Edge is the capacity they provide. Snowball provides a total of 50 TB or 80 TB, out of which 42 TB or 72 TB is available, while Amazon Snowball Edge provides 100 TB, out of which 83 TB is available.

NEW QUESTION 20

- (Topic 1)

A company hosts its multi-tier applications on AWS. For compliance, governance, auditing, and security, the company must track configuration changes on its AWS resources and record a history of API calls made to these resources.

What should a solutions architect do to meet these requirements?

- A. Use AWS CloudTrail to track configuration changes and AWS Config to record API calls
- B. Use AWS Config to track configuration changes and AWS CloudTrail to record API calls
- C. Use AWS Config to track configuration changes and Amazon CloudWatch to record API calls
- D. Use AWS CloudTrail to track configuration changes and Amazon CloudWatch to record API calls

Answer: B

Explanation:

AWS Config is a fully managed service that allows the company to assess, audit, and evaluate the configurations of its AWS resources. It provides a detailed inventory of the resources in use and tracks changes to resource configurations. AWS Config can detect configuration changes and alert the company when changes occur. It also provides a historical view of changes, which is essential for compliance and governance purposes. AWS CloudTrail is a fully managed service that provides a detailed history of API calls made to the company's AWS resources. It records all API activity in the AWS account, including who made the API call, when the call was made, and what resources were affected by the call. This information is critical for security and auditing purposes, as it allows the company to investigate any suspicious activity that might occur on its AWS resources.

NEW QUESTION 21

- (Topic 1)

A company uses 50 TB of data for reporting. The company wants to move this data from on premises to AWS. A custom application in the company's data center runs a weekly data transformation job. The company plans to pause the application until the data transfer is complete and needs to begin the transfer process as soon as possible.

The data center does not have any available network bandwidth for additional workloads. A solutions architect must transfer the data and must configure the transformation job to continue to run in the AWS Cloud.

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

- A. Use AWS DataSync to move the data. Create a custom transformation job by using AWS Glue.
- B. Order an AWS Snowcone device to move the data. Deploy the transformation application to the device.
- C. Order an AWS Snowball Edge Storage Optimized device.
- D. Copy the data to the device.
- E. Create a custom transformation job by using AWS Glue.
- F. Order an AWS
- G. Snowball Edge Storage Optimized device that includes Amazon EC2 compute. Copy the data to the device. Create a new EC2 instance on AWS to run the transformation application.

Answer: D

Explanation:

AWS Snowball Edge is a type of Snowball device with on-board storage and compute power for select AWS capabilities. Snowball Edge can do local processing and edge-computing workloads in addition to transferring data between your local environment and the AWS Cloud¹. Users can order an AWS Snowball Edge Storage Optimized device that includes Amazon EC2 compute to move 50 TB of data from on premises to AWS. The Storage Optimized device has 80 TB of usable storage and 40 vCPUs of compute power². Users can copy the data to the device using the AWS OpsHub graphical user interface or the Snowball client.

command line tool. Users can also create and run Amazon EC2 instances on the device using Amazon Machine Images (AMIs) that are compatible with the sb1 instance type. Users can use the Snowball Edge device to transfer the data and run the transformation job locally without using any network bandwidth. Users can also create a new EC2 instance on AWS to run the transformation application after the data transfer is complete. Amazon EC2 is a web service that provides secure, resizable compute capacity in the cloud. Users can launch an EC2 instance in the same AWS Region where they send their Snowball Edge device and choose an AMI that matches their application requirements. Users can use the EC2 instance to continue running the transformation job in the AWS Cloud.

NEW QUESTION 24

- (Topic 1)

A company is preparing to launch a public-facing web application in the AWS Cloud. The architecture consists of Amazon EC2 instances within a VPC behind an Elastic Load Balancer (ELB). A third-party service is used for the DNS. The company's solutions architect must recommend a solution to detect and protect against large-scale DDoS attacks.

Which solution meets these requirements?

- A. Enable Amazon GuardDuty on the account.
- B. Enable Amazon Inspector on the EC2 instances.
- C. Enable AWS Shield and assign Amazon Route 53 to it.
- D. Enable AWS Shield Advanced and assign the ELB to it.

Answer: D

Explanation:

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

NEW QUESTION 28

- (Topic 1)

A solutions architect is using Amazon S3 to design the storage architecture of a new digital media application. The media files must be resilient to the loss of an Availability Zone. Some files are accessed frequently while other files are rarely accessed in an unpredictable pattern. The solutions architect must minimize the costs of storing and retrieving the media files.

Which storage option meets these requirements?

- A. S3 Standard
- B. S3 Intelligent-Tiering
- C. S3 Standard-Infrequent Access (S3 Standard-IA)
- D. S3 One Zone-Infrequent Access (S3 One Zone-IA)

Answer: B

Explanation:

S3 Intelligent-Tiering - Perfect use case when you don't know the frequency of access or irregular patterns of usage.

Amazon S3 offers a range of storage classes designed for different use cases. These include S3 Standard for general-purpose storage of frequently accessed data; S3 Intelligent-Tiering for data with unknown or changing access patterns; S3 Standard- Infrequent Access (S3 Standard-IA) and S3 One Zone-Infrequent Access (S3 One Zone- IA) for long-lived, but less frequently accessed data; and Amazon S3 Glacier (S3 Glacier) and Amazon S3 Glacier Deep Archive (S3 Glacier Deep Archive) for long-term archive and digital preservation. If you have data residency requirements that can't be met by an existing AWS Region, you can use the S3 Outposts storage class to store your S3 data on- premises. Amazon S3 also offers capabilities to manage your data throughout its lifecycle. Once an S3 Lifecycle policy is set, your data will automatically transfer to a different storage class without any changes to your application.

https://aws.amazon.com/getting-started/hands-on/getting-started-using-amazon-s3-intelligent-tiering/?nc1=h_ls

NEW QUESTION 32

- (Topic 1)

A company is hosting a static website on Amazon S3 and is using Amazon Route 53 for DNS. The website is experiencing increased demand from around the world. The company must decrease latency for users who access the website.

Which solution meets these requirements MOST cost-effectively?

- A. Replicate the S3 bucket that contains the website to all AWS Region
- B. Add Route 53 geolocation routing entries.
- C. Provision accelerators in AWS Global Accelerator
- D. Associate the supplied IP addresses with the S3 bucket
- E. Edit the Route 53 entries to point to the IP addresses of the accelerators.
- F. Add an Amazon CloudFront distribution in front of the S3 bucket
- G. Edit the Route 53 entries to point to the CloudFront distribution.
- H. Enable S3 Transfer Acceleration on the bucket
- I. Edit the Route 53 entries to point to the new endpoint.

Answer: C

Explanation:

Amazon CloudFront is a content delivery network (CDN) that caches content at edge locations around the world, providing low latency and high transfer speeds to users accessing the content. Adding a CloudFront distribution in front of the S3 bucket will cache the static website's content at edge locations around the world, decreasing latency for users accessing the website. This solution is also cost-effective as it only charges for the data transfer and requests made by users accessing the content from the CloudFront edge locations. Additionally, this solution provides scalability and reliability benefits as CloudFront can automatically scale to handle increased demand and provide high availability for the website.

NEW QUESTION 33

- (Topic 1)

A company runs an ecommerce application 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 based on CPU utilization metrics. The ecommerce application stores the transaction data in a MySQL 8.0 database that is hosted on a large EC2 instance.

The database's performance degrades quickly as application load increases. The application handles more read requests than write transactions. The company

wants a solution that will automatically scale the database to meet the demand of unpredictable read workloads while maintaining high availability. Which solution will meet these requirements?

- A. Use Amazon Redshift with a single node for leader and compute functionality.
- B. Use Amazon RDS with a Single-AZ deployment Configure Amazon RDS to add reader instances in a different Availability Zone.
- C. Use Amazon Aurora with a Multi-AZ deployment
- D. Configure Aurora Auto Scaling with Aurora Replicas.
- E. Use Amazon ElastiCache for Memcached with EC2 Spot Instances.

Answer: C

Explanation:

AURORA is 5x performance improvement over MySQL on RDS and handles more read requests than write,; maintaining high availability = Multi-AZ deployment

NEW QUESTION 36

- (Topic 1)

A company is hosting a web application on AWS using a single Amazon EC2 instance that stores user-uploaded documents in an Amazon EBS volume. For better scalability and availability, the company duplicated the architecture and created a second EC2 instance and EBS volume in another Availability Zone placing both behind an Application Load Balancer After completing this change, users reported that, each time they refreshed the website, they could see one subset of their documents or the other, but never all of the documents at the same time.

What should a solutions architect propose to ensure users see all of their documents at once?

- A. Copy the data so both EBS volumes contain all the documents.
- B. Configure the Application Load Balancer to direct a user to the server with the documents
- C. Copy the data from both EBS volumes to Amazon EFS Modify the application to save new documents to Amazon EFS
- D. Configure the Application Load Balancer to send the request to both servers Return each document from the correct server.

Answer: C

Explanation:

<https://docs.aws.amazon.com/efs/latest/ug/how-it-works.html#how-it-works-ec2>

NEW QUESTION 39

- (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

Explanation:

<https://www.quora.com/How-can-I-use-DynamoDB-for-storing-metadata-for-Amazon-S3-objects>

This solution meets the requirements of scalability, performance, and availability. AWS Lambda can process the photos in parallel and scale up or down automatically depending on the demand. Amazon S3 can store the photos and metadata reliably and durably, and provide high availability and low latency.

DynamoDB can store the metadata efficiently and provide consistent performance. This solution also reduces the cost and complexity of managing EC2 instances and EBS volumes.

Option A is incorrect because storing the photos in DynamoDB is not a good practice, as it can increase the storage cost and limit the throughput. Option B is incorrect because Kinesis Data Firehose is not designed for processing photos, but for streaming data to destinations such as S3 or Redshift. Option D is incorrect because increasing the number of EC2 instances and using Provisioned IOPS SSD volumes does not guarantee scalability, as it depends on the load balancer and the application code. It also increases the cost and complexity of managing the infrastructure.

References:

? <https://aws.amazon.com/certification/certified-solutions-architect-professional/>

? <https://www.examtactics.com/discussions/amazon/view/7193-exam-aws-certified-solutions-architect-professional-topic-1/>

? <https://aws.amazon.com/architecture/>

NEW QUESTION 41

- (Topic 1)

An image-processing company has a web application that users use to upload images. The application uploads the images into an Amazon S3 bucket. The company has set up S3 event notifications to publish the object creation events to an Amazon Simple Queue Service (Amazon SQS) standard queue. The SQS queue serves as the event source for an AWS Lambda function that processes the images and sends the results to users through email.

Users report that they are receiving multiple email messages for every uploaded image. A solutions architect determines that SQS messages are invoking the Lambda function more than once, resulting in multiple email messages.

What should the solutions architect do to resolve this issue with the LEAST operational overhead?

- A. Set up long polling in the SQS queue by increasing the ReceiveMessage wait time to 30 seconds.
- B. Change the SQS standard queue to an SQS FIFO queue
- C. Use the message deduplication ID to discard duplicate messages.
- D. Increase the visibility timeout in the SQS queue to a value that is greater than the total of the function timeout and the batch window timeout.
- E. Modify the Lambda function to delete each message from the SQS queue immediately after the message is read before processing.

Answer: C

NEW QUESTION 44

- (Topic 1)

A company wants to migrate an on-premises data center to AWS. The data center hosts an SFTP server that stores its data on an NFS-based file system. The server holds 200 GB of data that needs to be transferred. The server must be hosted on an Amazon EC2 instance that uses an Amazon Elastic File System (Amazon EFS) file system

When combination of steps should a solutions architect take to automate this task? (Select TWO)

- A. Launch the EC2 instance into the same Availability Zone as the EFS file system
- B. Install an AWS DataSync agent in the on-premises data center
- C. Create a secondary Amazon Elastic Block Store (Amazon EBS) volume on the EC2 instance for the data
- D. Manually use an operating system copy command to push the data to the EC2 instance
- E. Use AWS DataSync to create a suitable location configuration for the on-premises SFTP server

Answer: BE

Explanation:

AWS DataSync is an online data movement and discovery service that simplifies data migration and helps users quickly, easily, and securely move their file or object data to, from, and between AWS storage services¹. Users can use AWS DataSync to transfer data between on-premises and AWS storage services. To use AWS DataSync, users need to install an AWS DataSync agent in the on-premises data center. The agent is a software appliance that connects to the source or destination storage system and handles the data transfer to or from AWS over the network². Users also need to use AWS DataSync to create a suitable location configuration for the on-premises SFTP server. A location is a logical representation of a storage system that contains files or objects that users want to transfer using DataSync. Users can create locations for NFS shares, SMB shares, HDFS file systems, self-managed object storage, Amazon S3 buckets, Amazon EFS file systems, Amazon FSx for Windows File Server file systems, Amazon FSx for Lustre file systems, Amazon FSx for OpenZFS file systems, Amazon FSx for NetApp ONTAP file systems, and AWS Snowcone devices³.

NEW QUESTION 45

- (Topic 1)

An e-commerce company wants to launch a one-deal-a-day website on AWS. Each day will feature exactly one product on sale for a period of 24 hours. The company wants to be able to handle millions of requests each hour with millisecond latency during peak hours.

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

- A. Use Amazon S3 to host the full website in different S3 buckets. Add Amazon CloudFront distributions. Set the S3 buckets as origins for the distributions. Store the order data in Amazon S3.
- B. Deploy the full website on Amazon EC2 instances that run in Auto Scaling groups across multiple Availability Zones. Add an Application Load Balancer (ALB) to distribute the website traffic. Add another ALB for the backend APIs. Store the data in Amazon RDS for MySQL.
- C. Migrate the full application to run in containers. Host the containers on Amazon Elastic Kubernetes Service (Amazon EKS). Use the Kubernetes Cluster Autoscaler to increase and decrease the number of pods to process bursts in traffic. Store the data in Amazon RDS for MySQL.
- D. Use an Amazon S3 bucket to host the website's static content. Deploy an Amazon CloudFront distribution.
- E. Set the S3 bucket as the origin. Use Amazon API Gateway and AWS Lambda functions for the backend APIs. Store the data in Amazon DynamoDB.

Answer: D

Explanation:

To launch a one-deal-a-day website on AWS with millisecond latency during peak hours and with the least operational overhead, the best option is to use an Amazon S3 bucket to host the website's static content, deploy an Amazon CloudFront distribution, set the S3 bucket as the origin, use Amazon API Gateway and AWS Lambda functions for the backend APIs, and store the data in Amazon DynamoDB. This option requires minimal operational overhead and can handle millions of requests each hour with millisecond latency during peak hours. Therefore, option D is the correct answer.

Reference: <https://aws.amazon.com/blogs/compute/building-a-serverless-multi-player-game-with-aws-lambda-and-amazon-dynamodb/>

NEW QUESTION 48

- (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: B

Explanation:

Amazon QuickSight is a data visualization service that allows you to create interactive dashboards and reports from various data sources, including Amazon S3 and Amazon RDS for PostgreSQL. You can connect all the data sources and create new datasets in QuickSight, and then publish dashboards to visualize the data. You can also share the dashboards with the appropriate users and groups, and control their access levels using IAM roles and permissions.

Reference: <https://docs.aws.amazon.com/quicksight/latest/user/working-with-data-sources.html>

NEW QUESTION 52

- (Topic 1)

A company has applications that run on Amazon EC2 instances in a VPC. One of the applications needs to call the Amazon S3 API to store and read objects. According to the company's security regulations, no traffic from the applications is allowed to travel across the internet. Which solution will meet these requirements?

- A. Configure an S3 interface endpoint.
- B. Configure an S3 gateway endpoint.
- C. Create an S3 bucket in a private subnet.
- D. Create an S3 bucket in the same Region as the EC2 instance.

Answer: B

Explanation:

<https://docs.aws.amazon.com/AmazonS3/latest/userguide/privatelink-interface-endpoints.html#types-of-vpc-endpoints-for-s3>
<https://docs.aws.amazon.com/vpc/latest/userguide/vpc-endpoints-s3.html>

NEW QUESTION 56

- (Topic 1)

A company runs multiple Windows workloads on AWS. The company's employees use Windows file shares that are hosted on two Amazon EC2 instances. The file shares synchronize data between themselves and maintain duplicate copies. The company wants a highly available and durable storage solution that preserves how users currently access the files. What should a solutions architect do to meet these requirements?

- A. Migrate all the data to Amazon S3 Set up IAM authentication for users to access files
- B. Set up an Amazon S3 File Gateway
- C. Mount the S3 File Gateway on the existing EC2 Instances.
- D. Extend the file share environment to Amazon FSx for Windows File Server with a Multi- AZ configuratio
- E. Migrate all the data to FSx for Windows File Server.
- F. Extend the file share environment to Amazon Elastic File System (Amazon EFS) with a Multi-AZ configuratio
- G. Migrate all the data to Amazon EFS.

Answer: C

Explanation:

<https://docs.aws.amazon.com/AWSEC2/latest/WindowsGuide/AmazonEFS.html> Amazon FSx for Windows File Server provides fully managed Microsoft Windows file servers, backed by a fully native Windows file system. <https://docs.aws.amazon.com/fsx/latest/WindowsGuide/what-is.html>

NEW QUESTION 60

- (Topic 1)

A company wants to improve its ability to clone large amounts of production data into a test environment in the same AWS Region. The data is stored in Amazon EC2 instances on Amazon Elastic Block Store (Amazon EBS) volumes. Modifications to the cloned data must not affect the production environment. The software that accesses this data requires consistently high I/O performance.

A solutions architect needs to minimize the time that is required to clone the production data into the test environment.

Which solution will meet these requirements?

- A. Take EBS snapshots of the production EBS volume
- B. Restore the snapshots onto EC2 instance store volumes in the test environment.
- C. Configure the production EBS volumes to use the EBS Multi-Attach featur
- D. Take EBS snapshots of the production EBS volume
- E. Attach the production EBS volumes to the EC2 instances in the test environment.
- F. Take EBS snapshots of the production EBS volume
- G. Create and initialize new EBS volume
- H. Attach the new EBS volumes to EC2 instances in the test environment before restoring the volumes from the production EBS snapshots.
- I. Take EBS snapshots of the production EBS volume
- J. Turn on the EBS fast snapshot restore feature on the EBS snapshot
- K. Restore the snapshots into new EBS volume
- L. Attach the new EBS volumes to EC2 instances in the test environment.

Answer: C

Explanation:

To clone the production data into the test environment with high I/O performance and without affecting the production environment, the best option is to take EBS snapshots of the production EBS volumes and restore them onto new EBS volumes in the test environment. Then, attach the new EBS volumes to EC2 instances in the test environment. This option minimizes the time required to clone the data and ensures that modifications to the cloned data do not affect the production environment. Therefore, option C is the correct answer.

Reference: <https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-restoring-volume.html>

NEW QUESTION 63

- (Topic 1)

A company has registered its domain name with Amazon Route 53. The company uses Amazon API Gateway in the ca-central-1 Region as a public interface for its backend microservice APIs. Third-party services consume the APIs securely. The company wants to design its API Gateway URL with the company's domain name and corresponding certificate so that the third-party services can use HTTPS.

Which solution will meet these requirements?

- A. Create stage variables in API Gateway with Name="Endpoint-URL" and Value="Company Domain Name" to overwrite the default UR
- B. Import the public certificate associated with the company's domain name into AWS Certificate Manager (ACM).
- C. Create Route 53 DNS records with the company's domain nam
- D. Point the alias record to the Regional API Gateway stage endpoin
- E. Import the public certificate associated with the company's domain name into AWS Certificate Manager (ACM) in the us-east-1 Region.

- F. Create a Regional API Gateway endpoint
- G. Associate the API Gateway endpoint with the company's domain name
- H. Import the public certificate associated with the company's domain name into AWS Certificate Manager (ACM) in the same Region
- I. Attach the certificate to the API Gateway endpoint
- J. Configure Route 53 to route traffic to the API Gateway endpoint.
- K. Create a Regional API Gateway endpoint
- L. Associate the API Gateway endpoint with the company's domain name
- M. Import the public certificate associated with the company's domain name into AWS Certificate Manager (ACM) in the us-east-1 Region
- N. Attach the certificate to the API Gateway API
- O. Create Route 53 DNS records with the company's domain name
- P. Point an A record to the company's domain name.

Answer: C

Explanation:

To design the API Gateway URL with the company's domain name and corresponding certificate, the company needs to do the following: 1. Create a Regional API Gateway endpoint: This will allow the company to create an endpoint that is specific to a region. 2. Associate the API Gateway endpoint with the company's domain name: This will allow the company to use its own domain name for the API Gateway URL. 3. Import the public certificate associated with the company's domain name into AWS Certificate Manager (ACM) in the same Region: This will allow the company to use HTTPS for secure communication with its APIs. 4. Attach the certificate to the API Gateway endpoint: This will allow the company to use the certificate for securing the API Gateway URL. 5. Configure Route 53 to route traffic to the API Gateway endpoint: This will allow the company to use Route 53 to route traffic to the API Gateway URL using the company's domain name.

NEW QUESTION 66

- (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: B

Explanation:

Amazon S3 File Gateway is a hybrid cloud storage service that enables on-premises applications to seamlessly use Amazon S3 cloud storage. It provides a file interface to Amazon S3 and supports SMB and NFS protocols. It also supports S3 Lifecycle policies that can automatically transition data from S3 Standard to S3 Glacier Deep Archive after a specified period of time. This solution will meet the requirements of increasing the company's available storage space without losing low-latency access to the most recently accessed files and providing file lifecycle management to avoid future storage issues.

Reference:

<https://docs.aws.amazon.com/storagegateway/latest/userguide/WhatIsStorageGateway.html>

NEW QUESTION 69

- (Topic 1)

A company hosts an application on multiple Amazon EC2 instances. The application processes messages from an Amazon SQS queue, writes to an Amazon RDS table, and deletes the message from the queue. Occasional duplicate records are found in the RDS table. The SQS queue does not contain any duplicate messages.

What should a solutions architect do to ensure messages are being processed once only?

- A. Use the CreateQueue API call to create a new queue
- B. Use the AddPermission API call to add appropriate permissions
- C. Use the ReceiveMessage API call to set an appropriate wait time
- D. Use the ChangeMessageVisibility API call to increase the visibility timeout

Answer: D

Explanation:

The visibility timeout begins when Amazon SQS returns a message. During this time, the consumer processes and deletes the message. However, if the consumer fails before deleting the message and your system doesn't call the DeleteMessage action for that message before the visibility timeout expires, the message becomes visible to other consumers and the message is received again. If a message must be received only once, your consumer should delete it within the duration of the visibility timeout. <https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqs-visibility-timeout.html>

Keyword: SQS queue writes to an Amazon RDS. From this, Option D is the best choice; other options are ruled out [Option A - You can't introduce one more Queue in the existing one; Option B - only Permission; Option C - Only Retrieves Messages]. FIFO queues are designed to never introduce duplicate messages. However, your message producer might introduce duplicates in certain scenarios: for example, if the producer sends a message, does not receive a response, and then resends the same message. Amazon SQS APIs provide deduplication functionality that prevents your message producer from sending duplicates. Any duplicates introduced by the message producer are removed within a 5-minute deduplication interval. For standard queues, you might occasionally receive a duplicate copy of a message (at-least-once delivery). If you use a standard queue, you must design your applications to be idempotent (that is, they must not be affected adversely when processing the same message more than once).

NEW QUESTION 71

- (Topic 1)

A solutions architect is designing the cloud architecture for a new application being deployed on AWS. The process should run in parallel while adding and removing application nodes as needed based on the number of jobs to be processed. The processor application is stateless. The solutions architect must ensure that the application is loosely coupled and the job items are durably stored.

Which design should the solutions architect use?

- A. Create an Amazon SNS topic to send the jobs that need to be processed Create an Amazon Machine Image (AMI) that consists of the processor application Create a launch configuration that uses the AMI Create an Auto Scaling group using the launch configuration Set the scaling policy for the Auto Scaling group to add and remove nodes based on CPU usage
- B. Create an Amazon SQS queue to hold the jobs that need to be processed Create an Amazon Machine image (AMI) that consists of the processor application Create a launch configuration that uses the AMI Create an Auto Scaling group using the launch configuration Set the scaling policy for the Auto Scaling group to add and remove nodes based on network usage
- C. Create an Amazon SQS queue to hold the jobs that needs to be processed Create an Amazon Machine image (AMI) that consists of the processor application Create a launch template that uses the AMI Create an Auto Scaling group using the launch template Set the scaling policy for the Auto Scaling group to add and remove nodes based on the number of items in the SQS queue
- D. Create an Amazon SNS topic to send the jobs that need to be processed Create an Amazon Machine Image (AMI) that consists of the processor application Create a launch template that uses the AMI Create an Auto Scaling group using the launch template Set the scaling policy for the Auto Scaling group to add and remove nodes based on the number of messages published to the SNS topic

Answer: C

Explanation:

"Create an Amazon SQS queue to hold the jobs that needs to be processed. Create an Amazon EC2 Auto Scaling group for the compute application. Set the scaling policy for the Auto Scaling group to add and remove nodes based on the number of items in the SQS queue"

In this case we need to find a durable and loosely coupled solution for storing jobs. Amazon SQS is ideal for this use case and can be configured to use dynamic scaling based on the number of jobs waiting in the queue. To configure this scaling you can use the backlog per instance metric with the target value being the acceptable backlog per instance to maintain. You can calculate these numbers as follows: Backlog per instance: To calculate your backlog per instance, start with the ApproximateNumberOfMessages queue attribute to determine the length of the SQS queue

NEW QUESTION 72

- (Topic 1)

A company collects temperature, humidity, and atmospheric pressure data in cities across multiple continents. The average volume of data collected per site each day is 500 GB. Each site has a high-speed internet connection. The company's weather forecasting applications are based in a single Region and analyze the data daily.

What is the FASTEST way to aggregate data from all of these global sites?

- A. Enable Amazon S3 Transfer Acceleration on the destination bucket
- B. Use multipart uploads to directly upload site data to the destination bucket.
- C. Upload site data to an Amazon S3 bucket in the closest AWS Region
- D. Use S3 cross-Region replication to copy objects to the destination bucket.
- E. Schedule AWS Snowball jobs daily to transfer data to the closest AWS Region
- F. Use S3 cross-Region replication to copy objects to the destination bucket.
- G. Upload the data to an Amazon EC2 instance in the closest Region
- H. Store the data in an Amazon Elastic Block Store (Amazon EBS) volume
- I. Once a day take an EBS snapshot and copy it to the centralized Region
- J. Restore the EBS volume in the centralized Region and run an analysis on the data daily.

Answer: A

Explanation:

You might want to use Transfer Acceleration on a bucket for various reasons, including the following:

You have customers that upload to a centralized bucket from all over the world. You transfer gigabytes to terabytes of data on a regular basis across continents.

You are unable to utilize all of your available bandwidth over the Internet when uploading to Amazon S3.

<https://docs.aws.amazon.com/AmazonS3/latest/dev/transfer-acceleration.html>

[https://aws.amazon.com/s3/transfer-acceleration/#:~:text=S3%20Transfer%20Acceleration%20\(S3TA\)%20reduces,to%20S3%20for%20remote%20applications:](https://aws.amazon.com/s3/transfer-acceleration/#:~:text=S3%20Transfer%20Acceleration%20(S3TA)%20reduces,to%20S3%20for%20remote%20applications:)

"Amazon S3 Transfer Acceleration can speed up content transfers to and from Amazon S3 by as much as 50-500% for long-distance transfer of larger objects.

Customers who have either web or mobile applications with widespread users or applications hosted far away from their S3 bucket can experience long and variable upload and download speeds over the Internet"

<https://docs.aws.amazon.com/AmazonS3/latest/userguide/mpuoverview.html>

"Improved throughput - You can upload parts in parallel to improve throughput."

NEW QUESTION 74

- (Topic 1)

A solutions architect must design a highly available infrastructure for a website. The website is powered by Windows web servers that run on Amazon EC2 instances. The solutions architect must implement a solution that can mitigate a large-scale DDoS attack that originates from thousands of IP addresses.

Downtime is not acceptable for the website.

Which actions should the solutions architect take to protect the website from such an attack? (Select TWO.)

- A. Use AWS Shield Advanced to stop the DDoS attack.
- B. Configure Amazon GuardDuty to automatically block the attackers.
- C. Configure the website to use Amazon CloudFront for both static and dynamic content.
- D. Use an AWS Lambda function to automatically add attacker IP addresses to VPC network ACLs.
- E. Use EC2 Spot Instances in an Auto Scaling group with a target tracking scaling policy that is set to 80% CPU utilization

Answer: AC

Explanation:

(<https://aws.amazon.com/cloudfront>)

NEW QUESTION 76

- (Topic 1)

A company is building an application in the AWS Cloud. The application will store data in Amazon S3 buckets in two AWS Regions. The company must use an AWS Key Management Service (AWS KMS) customer managed key to encrypt all data that is stored in the S3 buckets. The data in both S3 buckets must be encrypted and decrypted with the same KMS key. The data and the key must be stored in each of the two Regions.

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

- A. Create an S3 bucket in each Region Configure the S3 buckets to use server-side encryption with Amazon S3 managed encryption keys (SSE-S3) Configure replication between the S3 buckets.
- B. Create a customer managed multi-Region KMS key
- C. Create an S3 bucket in each Region
- D. Configure replication between the S3 buckets
- E. Configure the application to use the KMS key with client-side encryption.
- F. Create a customer managed KMS key and an S3 bucket in each Region Configure the S3 buckets to use server-side encryption with Amazon S3 managed encryption keys (SSE-S3) Configure replication between the S3 buckets.
- G. Create a customer managed KMS key and an S3 bucket in each Region Configure the S3 buckets to use server-side encryption with AWS KMS keys (SSE-KMS) Configure replication between the S3 buckets.

Answer: B

Explanation:

From <https://docs.aws.amazon.com/kms/latest/developerguide/custom-key-store-overview.html>

For most users, the default AWS KMS key store, which is protected by FIPS 140-2 validated cryptographic modules, fulfills their security requirements. There is no need to add an extra layer of maintenance responsibility or a dependency on an additional service. However, you might consider creating a custom key store if your organization has any of the following requirements: Key material cannot be stored in a shared environment. Key material must be subject to a secondary, independent audit path. The HSMs that generate and store key material must be certified at FIPS 140-2 Level 3.

<https://docs.aws.amazon.com/kms/latest/developerguide/custom-key-store-overview.html>

<https://docs.aws.amazon.com/kms/latest/developerguide/multi-region-keys-overview.html>

NEW QUESTION 80

- (Topic 1)

An Amazon EC2 administrator created the following policy associated with an IAM group containing several users

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "ec2:TerminateInstances",
      "Resource": "*",
      "Condition": {
        "IpAddress": {
          "aws:SourceIp": "10.100.100.0/24"
        }
      }
    },
    {
      "Effect": "Deny",
      "Action": "ec2:*",
      "Resource": "*",
      "Condition": {
        "StringNotEquals": {
          "ec2:Region": "us-east-1"
        }
      }
    }
  ]
}
```

What is the effect of this policy?

- A. Users can terminate an EC2 instance in any AWS Region except us-east-1.
- B. Users can terminate an EC2 instance with the IP address 10.100.100.1 in the us-east-1 Region
- C. Users can terminate an EC2 instance in the us-east-1 Region when the user's source IP is 10.100.100.254.
- D. Users cannot terminate an EC2 instance in the us-east-1 Region when the user's source IP is 10.100.100.254

Answer: C

Explanation:

As the policy prevents anyone from doing any EC2 action on any region except us-east-1 and allows only users with source IP 10.100.100.0/24 to terminate instances. So user with source IP 10.100.100.254 can terminate instances in us-east-1 region.

NEW QUESTION 83

- (Topic 1)

A company is planning to use an Amazon DynamoDB table for data storage. The company is concerned about cost optimization. The table will not be used on most mornings. In the evenings, the read and write traffic will often be unpredictable. When traffic spikes occur, they will happen very quickly.

What should a solutions architect recommend?

- A. Create a DynamoDB table in on-demand capacity mode.
- B. Create a DynamoDB table with a global secondary index.

- C. Create a DynamoDB table with provisioned capacity and auto scaling.
- D. Create a DynamoDB table in provisioned capacity mode, and configure it as a global table.

Answer: A

NEW QUESTION 87

- (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-aws-site-to-site-vpn/>

NEW QUESTION 91

- (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 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 94

- (Topic 1)

A company wants to migrate its on-premises application to AWS. The application produces output files that vary in size from tens of gigabytes to hundreds of terabytes. The application data must be stored in a standard file system structure. The company wants a solution that scales automatically, is highly available, and requires minimum operational overhead.

Which solution will meet these requirements?

- A. Migrate the application to run as containers on Amazon Elastic Container Service (Amazon ECS). Use Amazon S3 for storage.
- B. Migrate the application to run as containers on Amazon Elastic Kubernetes Service (Amazon EKS). Use Amazon Elastic Block Store (Amazon EBS) for storage.
- C. Migrate the application to Amazon EC2 instances in a Multi-AZ Auto Scaling group.
- D. Use Amazon Elastic File System (Amazon EFS) for storage.
- E. Migrate the application to Amazon EC2 instances in a Multi-AZ Auto Scaling group.
- F. Use Amazon Elastic Block Store (Amazon EBS) for storage.

Answer: C

Explanation:

EFS is a standard file system, it scales automatically and is highly available.

NEW QUESTION 95

- (Topic 1)

A company needs to store its accounting records in Amazon S3. The records must be immediately accessible for 1 year and then must be archived for an additional 9 years. No one at the company, including administrative users and root users, can be able to delete the records during the entire 10-year period. The records must be stored with maximum resiliency.

Which solution will meet these requirements?

- A. Store the records in S3 Glacier for the entire 10-year period.
- B. Use an access control policy to deny deletion of the records for a period of 10 years.
- C. Store the records by using S3 Intelligent-Tiering.
- D. Use an IAM policy to deny deletion of the record.
- E. After 10 years, change the IAM policy to allow deletion.
- F. Use an S3 Lifecycle policy to transition the records from S3 Standard to S3 Glacier Deep Archive after 1 year.
- G. Use S3 Object Lock in compliance mode for a period of 10 years.

- H. Use an S3 Lifecycle policy to transition the records from S3 Standard to S3 One Zone-Infrequent Access (S3 One Zone-IA) after 1 year
I. Use S3 Object Lock in governance mode for a period of 10 years.

Answer: C

Explanation:

To meet the requirements of immediately accessible records for 1 year and then archived for an additional 9 years with maximum resiliency, we can use S3 Lifecycle policy to transition records from S3 Standard to S3 Glacier Deep Archive after 1 year. And to ensure that the records cannot be deleted by anyone, including administrative and root users, we can use S3 Object Lock in compliance mode for a period of 10 years. Therefore, the correct answer is option C.
Reference: <https://docs.aws.amazon.com/AmazonS3/latest/userguide/object-lock.html>

NEW QUESTION 96

- (Topic 1)

A company needs guaranteed Amazon EC2 capacity in three specific Availability Zones in a specific AWS Region for an upcoming event that will last 1 week. What should the company do to guarantee the EC2 capacity?

- A. Purchase Reserved instances that specify the Region needed
- B. Create an On Demand Capacity Reservation that specifies the Region needed
- C. Purchase Reserved instances that specify the Region and three Availability Zones needed
- D. Create an On-Demand Capacity Reservation that specifies the Region and three Availability Zones needed

Answer: D

Explanation:

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-capacity-reservations.html>
Reserve instances: You will have to pay for the whole term (1 year or 3years) which is not cost effective

NEW QUESTION 99

- (Topic 1)

A social media company allows users to upload images to its website. The website runs on Amazon EC2 instances. During upload requests, the website resizes the images to a standard size and stores the resized images in Amazon S3. Users are experiencing slow upload requests to the website. The company needs to reduce coupling within the application and improve website performance. A solutions architect must design the most operationally efficient process for image uploads. Which combination of actions should the solutions architect take to meet these requirements? (Choose two.)

- A. Configure the application to upload images to S3 Glacier.
- B. Configure the web server to upload the original images to Amazon S3.
- C. Configure the application to upload images directly from each user's browser to Amazon S3 through the use of a presigned URL.
- D. Configure S3 Event Notifications to invoke an AWS Lambda function when an image is uploaded
- E. Use the function to resize the image
- F. Create an Amazon EventBridge (Amazon CloudWatch Events) rule that invokes an AWS Lambda function on a schedule to resize uploaded images.

Answer: CD

Explanation:

Amazon S3 is a highly scalable and durable object storage service that can store and retrieve any amount of data from anywhere on the web¹. Users can configure the application to upload images directly from each user's browser to Amazon S3 through the use of a presigned URL. A presigned URL is a URL that gives access to an object in an S3 bucket for a limited time and with a specific action, such as uploading an object². Users can generate a presigned URL programmatically using the AWS SDKs or AWS CLI. By using a presigned URL, users can reduce coupling within the application and improve website performance, as they do not need to send the images to the web server first. AWS Lambda is a serverless compute service that runs code in response to events and automatically manages the underlying compute resources³. Users can configure S3 Event Notifications to invoke an AWS Lambda function when an image is uploaded. S3 Event Notifications is a feature that allows users to receive notifications when certain events happen in an S3 bucket, such as object creation or deletion. Users can configure S3 Event Notifications to invoke a Lambda function that resizes the image and stores it back in the same or a different S3 bucket. This way, users can offload the image resizing task from the web server to Lambda.

NEW QUESTION 102

- (Topic 1)

A company has several web servers that need to frequently access a common Amazon RDS MySQL Multi-AZ DB instance. The company wants a secure method for the web servers to connect to the database while meeting a security requirement to rotate user credentials frequently. Which solution meets these requirements?

- A. Store the database user credentials in AWS Secrets Manager. Grant the necessary IAM permissions to allow the web servers to access AWS Secrets Manager.
- B. Store the database user credentials in AWS Systems Manager OpsCenter. Grant the necessary IAM permissions to allow the web servers to access OpsCenter.
- C. Store the database user credentials in a secure Amazon S3 bucket. Grant the necessary IAM permissions to allow the web servers to retrieve credentials and access the database.
- D. Store the database user credentials in files encrypted with AWS Key Management Service (AWS KMS) on the web server file system.
- E. The web server should be able to decrypt the files and access the database.

Answer: A

Explanation:

AWS Secrets Manager helps you protect secrets needed to access your applications, services, and IT resources. The service enables you to easily rotate, manage, and retrieve database credentials, API keys, and other secrets throughout their lifecycle.
<https://docs.aws.amazon.com/secretsmanager/latest/userguide/intro.html>
Secrets Manager enables you to replace hardcoded credentials in your code, including passwords, with an API call to Secrets Manager to retrieve the secret programmatically. This helps ensure the secret can't be compromised by someone examining your code, because the secret no longer exists in the code. Also, you can configure Secrets Manager to automatically rotate the secret for you according to a specified schedule. This enables you to replace long-term secrets with short-term ones, significantly reducing the risk of compromise.

NEW QUESTION 106

- (Topic 1)

A company is preparing to deploy a new serverless workload. A solutions architect must use the principle of least privilege to configure permissions that will be used to run an AWS Lambda function. An Amazon EventBridge (Amazon CloudWatch Events) rule will invoke the function. Which solution meets these requirements?

- A. Add an execution role to the function with `lambda: InvokeFunction` as the action and `*` as the principal.
- B. Add an execution role to the function with `lambda: InvokeFunction` as the action and `Service:amazonaws.com` as the principal.
- C. Add a resource-based policy to the function with `lambda:*` as the action and `Service:events.amazonaws.com` as the principal.
- D. Add a resource-based policy to the function with `lambda: InvokeFunction` as the action and `Service:events.amazonaws.com` as the principal.

Answer: D

Explanation:

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

NEW QUESTION 107

- (Topic 1)

A company recently signed a contract with an AWS Managed Service Provider (MSP) Partner for help with an application migration initiative. A solutions architect needs to share an Amazon Machine Image (AMI) from an existing AWS account with the MSP Partner's AWS account. The AMI is backed by Amazon Elastic Block Store (Amazon EBS) and uses a customer managed customer master key (CMK) to encrypt EBS volume snapshots. What is the MOST secure way for the solutions architect to share the AMI with the MSP Partner's AWS account?

- A. Make the encrypted AMI and snapshots publicly available
- B. Modify the CMK's key policy to allow the MSP Partner's AWS account to use the key
- C. Modify the `launchPermission` property of the AMI
- D. Share the AMI with the MSP Partner's AWS account only
- E. Modify the CMK's key policy to allow the MSP Partner's AWS account to use the key.
- F. Modify the `launchPermission` property of the AMI. Share the AMI with the MSP Partner's AWS account only
- G. Modify the CMK's key policy to trust a new CMK that is owned by the MSP Partner for encryption.
- H. Export the AMI from the source account to an Amazon S3 bucket in the MSP Partner's AWS account
- I. Encrypt the S3 bucket with a CMK that is owned by the MSP Partner. Copy and launch the AMI in the MSP Partner's AWS account.

Answer: B

Explanation:

Share the existing KMS key with the MSP external account because it has already been used to encrypt the AMI snapshot.

<https://docs.aws.amazon.com/kms/latest/developerguide/key-policy-modifying-external-accounts.html>

NEW QUESTION 110

- (Topic 1)

A company runs a photo processing application that needs to frequently upload and download pictures from Amazon S3 buckets that are located in the same AWS Region. A solutions architect has noticed an increased cost in data transfer fees and needs to implement a solution to reduce these costs. How can the solutions architect meet this requirement?

- A. Deploy Amazon API Gateway into a public subnet and adjust the route table to route S3 calls through it.
- B. Deploy a NAT gateway into a public subnet and attach an endpoint policy that allows access to the S3 buckets.
- C. Deploy the application into a public subnet and allow it to route through an internet gateway to access the S3 buckets.
- D. Deploy an S3 VPC gateway endpoint into the VPC and attach an endpoint policy that allows access to the S3 buckets.

Answer: D

Explanation:

The correct answer is Option D. Deploy an S3 VPC gateway endpoint into the VPC and attach an endpoint policy that allows access to the S3 buckets. By deploying an S3 VPC gateway endpoint, the application can access the S3 buckets over a private network connection within the VPC, eliminating the need for data transfer over the internet. This can help reduce data transfer fees as well as improve the performance of the application. The endpoint policy can be used to specify which S3 buckets the application has access to.

NEW QUESTION 111

- (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 115

- (Topic 1)

A solutions architect is developing a multiple-subnet VPC architecture. The solution will consist of six subnets in two Availability Zones. The subnets are defined as public, private and dedicated for databases. Only the Amazon EC2 instances running in the private subnets should be able to access a database.

Which solution meets these requirements?

- A. Create a new route table that excludes the route to the public subnets' CIDR block
- B. Associate the route table to the database subnets.
- C. Create a security group that denies ingress from the security group used by instances in the public subnet
- D. Attach the security group to an Amazon RDS DB instance.
- E. Create a security group that allows ingress from the security group used by instances in the private subnet
- F. Attach the security group to an Amazon RDS DB instance.
- G. Create a new peering connection between the public subnets and the private subnet
- H. Create a different peering connection between the private subnets and the database subnets.

Answer: C

Explanation:

Security groups are stateful. All inbound traffic is blocked by default. If you create an inbound rule allowing traffic in, that traffic is automatically allowed back out again. You cannot block specific IP address using Security groups (instead use Network Access Control Lists).

"You can specify allow rules, but not deny rules." "When you first create a security group, it has no inbound rules. Therefore, no inbound traffic originating from another host to your instance is allowed until you add inbound rules to the security group." Source:

https://docs.aws.amazon.com/vpc/latest/userguide/VPC_SecurityGroups.html#VPCSecurityGroups

NEW QUESTION 120

- (Topic 1)

A company is using a SQL database to store movie data that is publicly accessible. The database runs on an Amazon RDS Single-AZ DB instance. A script runs queries at random intervals each day to record the number of new movies that have been added to the database. The script must report a final total during business hours. The company's development team notices that the database performance is inadequate for development tasks when the script is running. A solutions architect must recommend a solution to resolve this issue. Which solution will meet this requirement with the LEAST operational overhead?

- A. Modify the DB instance to be a Multi-AZ deployment
- B. Create a read replica of the database. Configure the script to query only the read replica.
- C. Instruct the development team to manually export the entries in the database at the end of each day.
- D. Use Amazon ElastiCache to cache the common queries that the script runs against the database.

Answer: B

NEW QUESTION 122

- (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, 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 123

- (Topic 1)

A survey company has gathered data for several years from areas in the United States. The company hosts the data in an Amazon S3 bucket that is 3 TB in size and growing. The company has started to share the data with a European marketing firm that has S3 buckets. The company wants to ensure that its data transfer costs remain as low as possible.

Which solution will meet these requirements?

- A. Configure the Requester Pays feature on the company's S3 bucket.
- B. Configure S3 Cross-Region Replication from the company's S3 bucket to one of the marketing firm's S3 buckets.
- C. Configure cross-account access for the marketing firm so that the marketing firm has access to the company's S3 bucket.
- D. Configure the company's S3 bucket to use S3 Intelligent-Tiering. Sync the S3 bucket to one of the marketing firm's S3 buckets.

Answer: A

Explanation:

"Typically, you configure buckets to be Requester Pays buckets when you want to share data but not incur charges associated with others accessing the data. For example, you might use Requester Pays buckets when making available large datasets, such as zip code directories, reference data, geospatial information, or web crawling data." <https://docs.aws.amazon.com/AmazonS3/latest/userguide/RequesterPaysBuckets.html>

NEW QUESTION 124

- (Topic 1)

A company is migrating applications to AWS. The applications are deployed in different accounts. The company manages the accounts centrally by using AWS Organizations. The company's security team needs a single sign-on (SSO) solution across all the company's accounts. The company must continue managing the users and groups in its on-premises self-managed Microsoft Active Directory. Which solution will meet these requirements?

- A. Enable AWS Single Sign-On (AWS SSO) from the AWS SSO console
- B. Create a one-way forest trust or a one-way domain trust to connect the company's self-managed Microsoft Active Directory with AWS SSO by using AWS Directory Service for Microsoft Active Directory.
- C. Enable AWS Single Sign-On (AWS SSO) from the AWS SSO console
- D. Create a two-way forest trust to connect the company's self-managed Microsoft Active Directory with AWS SSO by using AWS Directory Service for Microsoft Active Directory.
- E. Use AWS Directory Service
- F. Create a two-way trust relationship with the company's self-managed Microsoft Active Directory.
- G. Deploy an identity provider (IdP) on premise
- H. Enable AWS Single Sign-On (AWS SSO) from the AWS SSO console.

Answer: A

Explanation:

To provide single sign-on (SSO) across all the company's accounts while continuing to manage users and groups in its on-premises self-managed Microsoft Active Directory, the solution is to enable AWS Single Sign-On (SSO) from the AWS SSO console and create a one-way forest trust or a one-way domain trust to connect the company's self-managed Microsoft Active Directory with AWS SSO by using AWS Directory Service for Microsoft Active Directory. This solution is described in the AWS documentation

NEW QUESTION 127

- (Topic 1)

A solutions architect is designing a VPC with public and private subnets. The VPC and subnets use IPv4 CIDR blocks. There is one public subnet and one private subnet in each of three Availability Zones (AZs) for high availability. An internet gateway is used to provide internet access for the public subnets. The private subnets require access to the internet to allow Amazon EC2 instances to download software updates. What should the solutions architect do to enable Internet access for the private subnets?

- A. Create three NAT gateways, one for each public subnet in each AZ
- B. Create a private route table for each AZ that forwards non-VPC traffic to the NAT gateway in its AZ.
- C. Create three NAT instances, one for each private subnet in each AZ
- D. Create a private route table for each AZ that forwards non-VPC traffic to the NAT instance in its AZ.
- E. Create a second internet gateway on one of the private subnets
- F. Update the route table for the private subnets that forward non-VPC traffic to the private internet gateway.
- G. Create an egress-only internet gateway on one of the public subnets
- H. Update the route table for the private subnets that forward non-VPC traffic to the egress-only internet gateway.

Answer: A

Explanation:

<https://aws.amazon.com/about-aws/whats-new/2018/03/introducing-amazon-vpc-nat-gateway-in-the-aws-govcloud-us-region/#:~:text=NAT%20Gateway%20is%20a%20highly,instances%20in%20a%20private%20subnet.>
<https://docs.aws.amazon.com/vpc/latest/userguide/vpc-nat-comparison.html>

NEW QUESTION 132

- (Topic 1)

A solutions architect is designing a two-tier web application. The application consists of a public-facing web tier hosted on Amazon EC2 in public subnets. The database tier consists of Microsoft SQL Server running on Amazon EC2 in a private subnet. Security is a high priority for the company. How should security groups be configured in this situation? (Select TWO)

- A. Configure the security group for the web tier to allow inbound traffic on port 443 from 0.0.0.0/0.
- B. Configure the security group for the web tier to allow outbound traffic on port 443 from 0.0.0.0/0.
- C. Configure the security group for the database tier to allow inbound traffic on port 1433 from the security group for the web tier.
- D. Configure the security group for the database tier to allow outbound traffic on ports 443 and 1433 to the security group for the web tier.
- E. Configure the security group for the database tier to allow inbound traffic on ports 443 and 1433 from the security group for the web tier.

Answer: AC

Explanation:

"Security groups create an outbound rule for every inbound rule." Not completely right. Stateful does NOT mean that if you create an inbound (or outbound) rule, it will create an outbound (or inbound) rule. What it does mean is: suppose you create an inbound rule on port 443 for the X IP. When a request enters on port 443 from X IP, it will allow traffic out for that request in the port 443. However, if you look at the outbound rules, there will not be any outbound rule on port 443 unless explicitly create it. In ACLs, which are stateless, you would have to create an inbound rule to allow incoming requests and an outbound rule to allow your application responds to those incoming requests.
https://docs.aws.amazon.com/vpc/latest/userguide/VPC_SecurityGroups.html#SecurityGroupRules

NEW QUESTION 133

- (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 138

- (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%20Amazon%20Redshift%2C%20Amazon%20OpenSearch%20Service%2C%20Kinesis,Delivery%20streams>

NEW QUESTION 140

- (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
- F. Management Service (AWS KMS) encryption key
- G. Migrate the credential file to the S3 bucket
- H. Point the application to the S3 bucket.
- I. Create an encrypted Amazon Elastic Block Store (Amazon EBS) volume (on each EC2 instance)
- J. Attach the new EBS volume to each EC2 instance
- K. 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-cloud/>
<https://aws.amazon.com/blogs/security/rotate-amazon-rds-database-credentials-automatically-with-aws-secrets-manager/>

NEW QUESTION 141

- (Topic 1)

A company uses AWS Organizations to manage multiple AWS accounts for different departments. The management account has an Amazon S3 bucket that contains project reports. The company wants to limit access to this S3 bucket to only users of accounts within the organization in AWS Organizations.

Which solution meets these requirements with the LEAST amount of operational overhead?

- A. Add the aws:PrincipalOrgID global condition key with a reference to the organization ID to the S3 bucket policy.
- B. Create an organizational unit (OU) for each department
- C. Add the aws:PrincipalOrgPaths global condition key to the S3 bucket policy.
- D. Use AWS CloudTrail to monitor the CreateAccount, InviteAccountToOrganization, LeaveOrganization, and RemoveAccountFromOrganization event
- E. Update the S3 bucket policy accordingly.
- F. Tag each user that needs access to the S3 bucket

G. Add the aws:PrincipalTag global condition key to the S3 bucket policy.

Answer: A

Explanation:

<https://aws.amazon.com/blogs/security/control-access-to-aws-resources-by-using-the-aws-organization-of-iam-principals/>

The aws:PrincipalOrgID global key provides an alternative to listing all the account IDs for all AWS accounts in an organization. For example, the following Amazon S3 bucket policy allows members of any account in the XXX organization to add an object into the examtopics bucket.

```
{"Version": "2020-09-10",  
"Statement": {  
  "Sid": "AllowPutObject", "Effect": "Allow",  
  "Principal": "*",  
  "Action": "s3:PutObject",  
  "Resource": "arn:aws:s3:::examtopics/*", "Condition": {"StringEquals":  
    {"aws:PrincipalOrgID":["XXX"]}}}}  
https://docs.aws.amazon.com/IAM/latest/UserGuide/reference\_policies\_condition-keys.html
```

NEW QUESTION 146

- (Topic 1)

A company is running a business-critical web application on Amazon EC2 instances behind an Application Load Balancer. The EC2 instances are in an Auto Scaling group. The application uses an Amazon Aurora PostgreSQL database that is deployed in a single Availability Zone. The company wants the application to be highly available with minimum downtime and minimum loss of data.

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

- A. Place the EC2 instances in different AWS Region
- B. Use Amazon Route 53 health checks to redirect traffi
- C. Use Aurora PostgreSQL Cross-Region Replication.
- D. Configure the Auto Scaling group to use multiple Availability Zone
- E. Configure the database as Multi-A
- F. Configure an Amazon RDS Proxy instance for the database.
- G. Configure the Auto Scaling group to use one Availability Zon
- H. Generate hourly snapshots of the databas
- I. Recover the database from the snapshots in the event of a failure.
- J. Configure the Auto Scaling group to use multiple AWS Region
- K. Write the data from the application to Amazon S3. Use S3 Event Notifications to launch an AWS Lambda function to write the data to the database.

Answer: B

Explanation:

To achieve high availability with minimum downtime and minimum loss of data, the Auto Scaling group should be configured to use multiple Availability Zones to ensure that there is no single point of failure. The database should be configured as Multi- AZ to enable automatic failover in case of an outage in the primary Availability Zone. Additionally, an Amazon RDS Proxy instance can be used to improve the scalability and availability of the database by reducing connection failures and improving failover times.

NEW QUESTION 149

- (Topic 1)

A company wants to move a multi-tiered application from on premises to the AWS Cloud to improve the application's performance. The application consists of application tiers that communicate with each other by way of RESTful services. Transactions are dropped when one tier becomes overloaded. A solutions architect must design a solution that resolves these issues and modernizes the application.

Which solution meets these requirements and is the MOST operationally efficient?

- A. Use Amazon API Gateway and direct transactions to the AWS Lambda functions as the application laye
- B. Use Amazon Simple Queue Service (Amazon SQS) as the communication layer between application services.
- C. Use Amazon CloudWatch metrics to analyze the application performance history to determine the server's peak utilization during the performance failure
- D. Increase the size of the application server's Amazon EC2 instances to meet the peak requirements.
- E. Use Amazon Simple Notification Service (Amazon SNS) to handle the messaging between application servers running on Amazon EC2 in an Auto Scaling grou
- F. Use Amazon CloudWatch to monitor the SNS queue length and scale up and down as required.
- G. Use Amazon Simple Queue Service (Amazon SQS) to handle the messaging between application servers running on Amazon EC2 in an Auto Scaling grou
- H. Use Amazon CloudWatch to monitor the SQS queue length and scale up when communication failures are detected.

Answer: A

Explanation:

<https://aws.amazon.com/getting-started/hands-on/build-serverless-web-app-lambda-apigateway-s3-dynamodb-cognito/module-4/>

Build a Serverless Web Application with AWS Lambda, Amazon API Gateway, AWS Amplify, Amazon DynamoDB, and Amazon Cognito. This example showed similar setup as question: Build a Serverless Web Application with AWS Lambda, Amazon API Gateway, AWS Amplify, Amazon DynamoDB, and Amazon Cognito

NEW QUESTION 152

- (Topic 1)

A company recently launched a variety of new workloads on Amazon EC2 instances in its AWS account. The company needs to create a strategy to access and administer the instances remotely and securely. The company needs to implement a repeatable process that works with native AWS services and follows the AWS Well-Architected Framework.

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

- A. Use the EC2 serial console to directly access the terminal interface of each instance foradministration.
- B. Attach the appropriate IAM role to each existing instance and new instanc
- C. Use AWS Systems Manager Session Manager to establish a remote SSH session.
- D. Create an administrative SSH key pai
- E. Load the public key into each EC2 instanc

- F. Deploy a bastion host in a public subnet to provide a tunnel for administration of each instance.
- G. Establish an AWS Site-to-Site VPN connectio
- H. Instruct administrators to use their local on-premises machines to connect directly to the instances by using SSH keys across the VPN tunnel.

Answer: B

Explanation:

<https://docs.aws.amazon.com/systems-manager/latest/userguide/setup-launch-managed-instance.html>

NEW QUESTION 154

- (Topic 1)

A hospital recently deployed a RESTful API with Amazon API Gateway and AWS Lambda The hospital uses API Gateway and Lambda to upload reports that are in PDF format and JPEG format The hospital needs to modify the Lambda code to identify protected health information (PHI) in the reports Which solution will meet these requirements with the LEAST operational overhead?

- A. Use existing Python libraries to extract the text from the reports and to identify the PHI from the extracted text.
- B. Use Amazon Textract to extract the text from the reports Use Amazon SageMaker to identify the PHI from the extracted text.
- C. Use Amazon Textract to extract the text from the reports Use Amazon Comprehend Medical to identify the PHI from the extracted text
- D. Use Amazon Rekognition to extract the text from the reports Use Amazon Comprehend Medical to identify the PHI from the extracted text

Answer: C

Explanation:

To meet the requirements of the company to have access to both AWS and on-premises file storage with minimum latency, a hybrid cloud architecture can be used. One solution is to deploy and configure Amazon FSx for Windows File Server on AWS, which provides fully managed Windows file servers. The on-premises file data can be moved to the FSx File Gateway, which can act as a bridge between on-premises and AWS file storage. The cloud workloads can be configured to use FSx for Windows File Server on AWS, while the on-premises workloads can be configured to use the FSx File Gateway. This solution minimizes operational overhead and requires no significant changes to the existing file access patterns. The connectivity between on-premises and AWS can be established using an AWS Site-to-Site VPN connection.

Reference:

AWS FSx for Windows File Server: <https://aws.amazon.com/fsx/windows/> AWS FSx File Gateway: <https://aws.amazon.com/fsx/file-gateway/>

AWS Site-to-Site VPN: <https://aws.amazon.com/vpn/site-to-site-vpn/>

NEW QUESTION 158

- (Topic 1)

A company wants to reduce the cost of its existing three-tier web architecture. The web, application, and database servers are running on Amazon EC2 instances for the development, test, and production environments. The EC2 instances average 30% CPU utilization during peak hours and 10% CPU utilization during non-peak hours.

The production EC2 instances run 24 hours a day. The development and test EC2 instances run for at least 8 hours each day. The company plans to implement automation to stop the development and test EC2 instances when they are not in use.

Which EC2 instance purchasing solution will meet the company's requirements MOST cost-effectively?

- A. Use Spot Instances for the production EC2 instance
- B. Use Reserved Instances for the development and test EC2 instances.
- C. Use Reserved Instances for the production EC2 instance
- D. Use On-Demand Instances for the development and test EC2 instances.
- E. Use Spot blocks for the production EC2 instance
- F. Use Reserved Instances for the development and test EC2 instances.
- G. Use On-Demand Instances for the production EC2 instance
- H. Use Spot blocks for the development and test EC2 instances.

Answer: B

NEW QUESTION 163

- (Topic 2)

A company has a Windows-based application that must be migrated to AWS. The application requires the use of a shared Windows file system attached to multiple Amazon EC2 Windows instances that are deployed across multiple Availability Zones.

What should a solutions architect do to meet this requirement?

- A. Configure AWS Storage Gateway in volume gateway mod
- B. Mount the volume to each Windows instance.
- C. Configure Amazon FSx for Windows File Serve
- D. Mount the Amazon FSx file system to each Windows instance.
- E. Configure a file system by using Amazon Elastic File System (Amazon EFS). Mount the EFS file system to each Windows instance.
- F. Configure an Amazon Elastic Block Store (Amazon EBS) volume with the required siz
- G. Attach each EC2 instance to the volum
- H. Mount the file system within the volume to each Windows instance.

Answer: B

Explanation:

This solution meets the requirement of migrating a Windows-based application that requires the use of a shared Windows file system attached to multiple Amazon EC2 Windows instances that are deployed across multiple Availability Zones. Amazon FSx for Windows File Server provides fully managed shared storage built on Windows Server, and delivers a wide range of data access, data management, and administrative capabilities. It supports the Server Message Block (SMB) protocol and can be mounted to EC2 Windows instances across multiple Availability Zones.

Option A is incorrect because AWS Storage Gateway in volume gateway mode provides cloud-backed storage volumes that can be mounted as iSCSI devices from on-premises application servers, but it does not support SMB protocol or EC2 Windows instances. Option C is incorrect because Amazon Elastic File System (Amazon EFS) provides a scalable and elastic NFS file system for Linux-based workloads, but it does not support SMB protocol or EC2 Windows instances. Option D is incorrect because Amazon Elastic Block Store (Amazon EBS) provides persistent block storage volumes for use with EC2 instances, but it does not support SMB protocol or attaching multiple instances to the same volume.

References:

? <https://aws.amazon.com/fsx/windows/>

? <https://docs.aws.amazon.com/fsx/latest/WindowsGuide/using-file-shares.html>

NEW QUESTION 167

- (Topic 2)

A company needs to save the results from a medical trial to an Amazon S3 repository. The repository must allow a few scientists to add new files and must restrict all other users to read-only access. No users can have the ability to modify or delete any files in the repository. The company must keep every file in the repository for a minimum of 1 year after its creation date.

Which solution will meet these requirements?

- A. Use S3 Object Lock In governance mode with a legal hold of 1 year
- B. Use S3 Object Lock in compliance mode with a retention period of 365 days.
- C. Use an IAM role to restrict all users from deleting or changing objects in the S3 bucket Use an S3 bucket policy to only allow the IAM role
- D. Configure the S3 bucket to invoke an AWS Lambda function every time an object is added Configure the function to track the hash of the saved object to that modified objects can be marked accordingly

Answer: B

Explanation:

In compliance mode, a protected object version can't be overwritten or deleted by any user, including the root user in your AWS account. When an object is locked in compliance mode, its retention mode can't be changed, and its retention period can't be shortened. Compliance mode helps ensure that an object version can't be overwritten or deleted for the duration of the retention period. In governance mode, users can't overwrite or delete an object version or alter its lock settings unless they have special permissions. With governance mode, you protect objects against being deleted by most users, but you can still grant some users permission to alter the retention settings or delete the object if necessary. In Governance mode, Objects can be deleted by some users with special permissions, this is against the requirement.

Compliance:

- Object versions can't be overwritten or deleted by any user, including the root user
- Objects retention modes can't be changed, and retention periods can't be shortened

Governance:

- Most users can't overwrite or delete an object version or alter its lock settings
- Some users have special permissions to change the retention or delete the object

NEW QUESTION 168

- (Topic 2)

A company produces batch data that comes from different databases. The company also produces live stream data from network sensors and application APIs. The company needs to consolidate all the data into one place for business analytics. The company needs to process the incoming data and then stage the data in different Amazon S3 buckets. Teams will later run one-time queries and import the data into a business intelligence tool to show key performance indicators (KPIs).

Which combination of steps will meet these requirements with the LEAST operational overhead? (Choose two.)

- A. Use Amazon Athena for one-time queries Use Amazon QuickSight to create dashboards for KPIs
- B. Use Amazon Kinesis Data Analytics for one-time queries Use Amazon QuickSight to create dashboards for KPIs
- C. Create custom AWS Lambda functions to move the individual records from the databases to an Amazon Redshift cluster
- D. Use an AWS Glue extract transform, and load (ETL) job to convert the data into JSON format Load the data into multiple Amazon OpenSearch Service (Amazon Elasticsearch Service) clusters
- E. Use blueprints in AWS Lake Formation to identify the data that can be ingested into a data lake Use AWS Glue to crawl the source extract the data and load the data into Amazon S3 in Apache Parquet format

Answer: AE

Explanation:

Amazon Athena is the best choice for running one-time queries on streaming data. Although Amazon Kinesis Data Analytics provides an easy and familiar standard SQL language to analyze streaming data in real-time, it is designed for continuous queries rather than one-time queries[1]. On the other hand, Amazon Athena is a serverless interactive query service that allows querying data in Amazon S3 using SQL. It is optimized for ad-hoc querying and is ideal for running one-time queries on streaming data[2]. AWS Lake Formation uses as a central place to have all your data for analytics purposes (E). Athena integrates perfectly with S3 and can make queries (A).

NEW QUESTION 169

- (Topic 2)

An ecommerce company hosts its analytics application in the AWS Cloud. The application generates about 300 MB of data each month. The data is stored in JSON format. The company is evaluating a disaster recovery solution to back up the data. The data must be accessible in milliseconds if it is needed, and the data must be kept for 30 days.

Which solution meets these requirements MOST cost-effectively?

- A. Amazon OpenSearch Service (Amazon Elasticsearch Service)
- B. Amazon S3 Glacier
- C. Amazon S3 Standard
- D. Amazon RDS for PostgreSQL

Answer: C

Explanation:

This solution meets the requirements of a disaster recovery solution to back up the data that is generated by an analytics application, stored in JSON format, and must be accessible in milliseconds if it is needed. Amazon S3 Standard is a durable and scalable storage class for frequently accessed data. It can store any amount of data and provide high availability and performance. It can also support millisecond access time for data retrieval.

Option A is incorrect because Amazon OpenSearch Service (Amazon Elasticsearch Service) is a search and analytics service that can index and query data, but it is not a backup solution for data stored in JSON format. Option B is incorrect because Amazon S3 Glacier is a low-cost storage class for data archiving and long-term backup, but it does not support millisecond access time for data retrieval. Option D is incorrect because Amazon RDS for PostgreSQL is a relational database

service that can store and query structured data, but it is not a backup solution for data stored in JSON format.

References:

? <https://aws.amazon.com/s3/storage-classes/>

? https://aws.amazon.com/s3/faqs/#Durability_and_data_protection

NEW QUESTION 170

- (Topic 2)

A company uses a popular content management system (CMS) for its corporate website. However, the required patching and maintenance are burdensome. The company is redesigning its website and wants anew solution. The website will be updated four times a year and does not need to have any dynamic content available. The solution must provide high scalability and enhanced security.

Which combination of changes will meet these requirements with the LEAST operational overhead? (Choose two.)

- A. Deploy an AWS WAF web ACL in front of the website to provide HTTPS functionality
- B. Create and deploy an AWS Lambda function to manage and serve the website content
- C. Create the new website and an Amazon S3 bucket Deploy the website on the S3 bucket with static website hosting enabled
- D. Create the new websit
- E. Deploy the website by using an Auto Scaling group of Amazon EC2 instances behind an Application Load Balancer.

Answer: AD

Explanation:

A -> We can configure CloudFront to require HTTPS from clients (enhanced security)

https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/using_https-viewers-to-cloudfront.html D -> storing static website on S3 provides scalability and less operational overhead, then configuration of Application LB and EC2 instances (hence E is out)

NEW QUESTION 172

- (Topic 2)

A company is migrating its on-premises PostgreSQL database to Amazon Aurora PostgreSQL. The on-premises database must remain online and accessible during the migration. The Aurora database must remain synchronized with the on-premises database.

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

- A. Create an ongoing replication task.
- B. Create a database backup of the on-premises database
- C. Create an AWS Database Migration Service (AWS DMS) replication server
- D. Convert the database schema by using the AWS Schema Conversion Tool (AWS SCT).
- E. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to monitor the database synchronization

Answer: AC

Explanation:

AWS Database Migration Service supports homogeneous migrations such as Oracle to Oracle, as well as heterogeneous migrations between different database platforms, such as Oracle or Microsoft SQL Server to Amazon Aurora. With AWS Database Migration Service, you can also continuously replicate data with low latency from any supported source to any supported target. For example, you can replicate from multiple sources to Amazon Simple Storage Service (Amazon S3) to build a highly available and scalable data lake solution. You can also consolidate databases into a petabyte-scale data warehouse by streaming data to Amazon Redshift. Learn more about the supported source and target databases. <https://aws.amazon.com/dms/>

NEW QUESTION 174

- (Topic 2)

A security team wants to limit access to specific services or actions in all of the team's AWS accounts. All accounts belong to a large organization in AWS Organizations. The solution must be scalable and there must be a single point where permissions can be maintained.

What should a solutions architect do to accomplish this?

- A. Create an ACL to provide access to the services or actions.
- B. Create a security group to allow accounts and attach it to user groups.
- C. Create cross-account roles in each account to deny access to the services or actions.
- D. Create a service control policy in the root organizational unit to deny access to the services or actions.

Answer: D

Explanation:

Service control policies (SCPs) are one type of policy that you can use to manage your organization. SCPs offer central control over the maximum available permissions for all accounts in your organization, allowing you to ensure your accounts stay within your organization's access control guidelines. See https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scp.html.

NEW QUESTION 178

- (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 taskRoleAm 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 instancesfor the ECS cluster while logged in as this account.

Answer: B

Explanation:

<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-resource-ecs-taskdefinition.html>

NEW QUESTION 179

- (Topic 2)

A company wants to build a scalable key management Infrastructure to support developers who need to encrypt data in their applications. What should a solutions architect do to reduce the operational burden?

- A. Use multifactor authentication (MFA) to protect the encryption keys.
- B. Use AWS Key Management Service (AWS KMS) to protect the encryption keys
- C. Use AWS Certificate Manager (ACM) to create, store, and assign the encryption keys
- D. Use an IAM policy to limit the scope of users who have access permissions to protect the encryption keys

Answer: B

Explanation:

<https://aws.amazon.com/kms/faqs/#:~:text=If%20you%20are%20a%20developer%20who%20needs%20to%20digitally,a%20broad%20set%20of%20industry%20and%20regional%20compliance%20regimes.>

NEW QUESTION 183

- (Topic 2)

A company is concerned about the security of its public web application due to recent web attacks. The application uses an Application Load Balancer (ALB). A solutions architect must reduce the risk of DDoS attacks against the application. What should the solutions architect do to meet this requirement?

- A. Add an Amazon Inspector agent to the ALB.
- B. Configure Amazon Macie to prevent attacks.
- C. Enable AWS Shield Advanced to prevent attacks.
- D. Configure Amazon GuardDuty to monitor the ALB.

Answer: C

Explanation:

AWS Shield Advanced provides expanded DDoS attack protection for your Amazon EC2 instances, Elastic Load Balancing load balancers, CloudFront distributions, Route 53 hosted zones, and AWS Global Accelerator standard accelerators. <https://docs.aws.amazon.com/waf/latest/developerguide/what-is-aws-waf.html>

NEW QUESTION 184

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