

SAA-C03 Dumps

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 is running a popular social media website. The website gives users the ability to upload images to share with other users. The company wants to make sure that the images do not contain inappropriate content. The company needs a solution that minimizes development effort.

What should a solutions architect do to meet these requirements?

- A. Use Amazon Comprehend to detect inappropriate content
- B. Use human review for low-confidence predictions.
- C. Use Amazon Rekognition to detect inappropriate content
- D. Use human review for low-confidence predictions.
- E. Use Amazon SageMaker to detect inappropriate content
- F. Use ground truth to label low-confidence predictions.
- G. Use AWS Fargate to deploy a custom machine learning model to detect inappropriate content
- H. Use ground truth to label low-confidence predictions.

Answer: B

Explanation:

<https://docs.aws.amazon.com/rekognition/latest/dg/moderation.html?pg=ln&sec=ft> <https://docs.aws.amazon.com/rekognition/latest/dg/a2i-rekognition.html>

NEW QUESTION 4

- (Topic 1)

A company's application integrates with multiple software-as-a-service (SaaS) sources for data collection. The company runs Amazon EC2 instances to receive the data and to upload the data to an Amazon S3 bucket for analysis. The same EC2 instance that receives and uploads the data also sends a notification to the user when an upload is complete. The company has noticed slow application performance and wants to improve the performance as much as possible.

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

- A. Create an Auto Scaling group so that EC2 instances can scale out
- B. Configure an S3 event notification to send events to an Amazon Simple Notification Service (Amazon SNS) topic when the upload to the S3 bucket is complete.
- C. Create an Amazon AppFlow flow to transfer data between each SaaS source and the S3 bucket
- D. Configure an S3 event notification to send events to an Amazon Simple Notification Service (Amazon SNS) topic when the upload to the S3 bucket is complete.
- E. Create an Amazon EventBridge (Amazon CloudWatch Events) rule for each SaaS source to send output data
- F. Configure the S3 bucket as the rule's target
- G. Create a second EventBridge (CloudWatch Events) rule to send events when the upload to the S3 bucket is complete
- H. Configure an Amazon Simple Notification Service (Amazon SNS) topic as the second rule's target.
- I. Create a Docker container to use instead of an EC2 instance
- J. Host the containerized application on Amazon Elastic Container Service (Amazon ECS). Configure Amazon CloudWatch Container Insights to send events to an Amazon Simple Notification Service (Amazon SNS) topic when the upload to the S3 bucket is complete.

Answer: B

Explanation:

Amazon AppFlow is a fully managed integration service that enables you to securely transfer data between Software-as-a-Service (SaaS) applications like Salesforce, SAP, Zendesk, Slack, and ServiceNow, and AWS services like Amazon S3 and Amazon Redshift, in just a few clicks.

<https://aws.amazon.com/appflow/>

NEW QUESTION 5

- (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_kwid=AL14422!3!536452716950!p!g!aws%20s3%20pricing&ef_id=Cj0KCQjwnbmaBhD-ARIsAGTPcfVHUZN5_BMrzI5zBcaC8KnqpnNZvbZzqPkH6k7q4JcYO5KFLx0YYgaAm6nEALw_wcB:G:s&s_kwid=AL14422!3!536452716950!p!g!aws%20s3%20pricing

NEW QUESTION 6

- (Topic 1)

A company's website uses an Amazon EC2 instance store for its catalog of items. The company wants to make sure that the catalog is highly available and that the catalog is stored in a durable location. What should a solutions architect do to meet these requirements?

- A. Move the catalog to Amazon ElastiCache for Redis.
- B. Deploy a larger EC2 instance with a larger instance store.
- C. Move the catalog from the instance store to Amazon S3 Glacier Deep Archive.
- D. Move the catalog to an Amazon Elastic File System (Amazon EFS) file system.

Answer: D

Explanation:

Moving the catalog to an Amazon Elastic File System (Amazon EFS) file system provides both high availability and durability. Amazon EFS is a fully-managed, highly-available, and durable file system that is built to scale on demand. With Amazon EFS, the catalog data can be stored and accessed from multiple EC2 instances in different availability zones, ensuring high availability. Also, Amazon EFS automatically stores files redundantly within and across multiple availability zones, making it a durable storage option.

NEW QUESTION 7

- (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 8

- (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 9

- (Topic 1)

A company is migrating a distributed application to AWS The application serves variable workloads The legacy platform consists of a primary server that coordinates jobs across multiple compute nodes The company wants to modernize the application with a solution that maximizes resiliency and scalability. How should a solutions architect design the architecture to meet these requirements?

- A. Configure an Amazon Simple Queue Service (Amazon SQS) queue as a destination for the jobs Implement the compute nodes with Amazon EC2 instances that are managed in an Auto Scaling group
- B. Configure EC2 Auto Scaling to use scheduled scaling
- C. Configure an Amazon Simple Queue Service (Amazon SQS) queue as a destination for the jobs Implement the compute nodes with Amazon EC2 Instances that are managed in an Auto Scaling group Configure EC2 Auto Scaling based on the size of the queue
- D. Implement the primary server and the compute nodes with Amazon EC2 instances that are managed In an Auto Scaling group
- E. Configure AWS CloudTrail as a destination for the jobs Configure EC2 Auto Scaling based on the load on the primary server
- F. implement the primary server and the compute nodes with Amazon EC2 instances that are managed in an Auto Scaling group Configure Amazon EventBridge (Amazon CloudWatch Events) as a destination for the jobs Configure EC2 Auto Scaling based on the load on the compute nodes

Answer: B

Explanation:

To maximize resiliency and scalability, the best solution is to use an Amazon SQS queue as a destination for the jobs. This decouples the primary server from the compute nodes, allowing them to scale independently. This also helps to prevent job loss in the event of a failure. Using an Auto Scaling group of Amazon EC2 instances for the compute nodes allows for automatic scaling based on the workload. In this case, it's recommended to configure the Auto Scaling group based on the size of the Amazon SQS queue, which is a better indicator of the actual workload than the load on the primary server or compute nodes. This approach ensures that the application can handle variable workloads, while also minimizing costs by automatically scaling up or down the compute nodes as needed.

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 RD
- N. Query the files from Amazon RD
- 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 10

- (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 14

- (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 19

- (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 24

- (Topic 1)

A company needs the ability to analyze the log files of its proprietary application. The logs are stored in JSON format in an Amazon S3 bucket. Queries will be simple and will run on-demand. A solutions architect needs to perform the analysis with minimal changes to the existing architecture. What should the solutions architect do to meet these requirements with the LEAST amount of operational overhead?

- A. Use Amazon Redshift to load all the content into one place and run the SQL queries as needed
- B. Use Amazon CloudWatch Logs to store the logs. Run SQL queries as needed from the Amazon CloudWatch console

- C. Use Amazon Athena directly with Amazon S3 to run the queries as needed
- D. Use AWS Glue to catalog the logs Use a transient Apache Spark cluster on Amazon EMR to run the SQL queries as needed

Answer: C

Explanation:

Amazon Athena can be used to query JSON in S3

NEW QUESTION 26

- (Topic 1)

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

What should a solutions architect do to meet those requirements?

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

Answer: C

Explanation:

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

NEW QUESTION 27

- (Topic 1)

A company is building an ecommerce web application on AWS. The application sends information about new orders to an Amazon API Gateway REST API to process. The company wants to ensure that orders are processed in the order that they are received.

Which solution will meet these requirements?

- A. Use an API Gateway integration to publish a message to an Amazon Simple Notification Service (Amazon SNS) topic when the application receives an order.
- B. Subscribe an AWS Lambda function to the topic to perform processing.
- C. Use an API Gateway integration to send a message to an Amazon Simple Queue Service (Amazon SQS) FIFO queue when the application receives an order.
- D. Configure the SQS FIFO queue to invoke an AWS Lambda function for processing.
- E. Use an API Gateway authorizer to block any requests while the application processes an order.
- F. Use an API Gateway integration to send a message to an Amazon Simple Queue Service (Amazon SQS) standard queue when the application receives an order.
- G. Configure the SQS standard queue to invoke an AWS Lambda function for processing.

Answer: B

Explanation:

To ensure that orders are processed in the order that they are received, the best solution is to use an Amazon SQS FIFO (First-In-First-Out) queue. This type of queue maintains the exact order in which messages are sent and received. In this case, the application can send information about new orders to an Amazon API Gateway REST API, which can then use an API Gateway integration to send a message to an Amazon SQS FIFO queue for processing. The queue can then be configured to invoke an AWS Lambda function to perform the necessary processing on each order. This ensures that orders are processed in the exact order in which they are received.

NEW QUESTION 31

- (Topic 1)

A company has a website hosted on AWS. The website is behind an Application Load Balancer (ALB) that is configured to handle HTTP and HTTPS separately. The company wants to forward all requests to the website so that the requests will use HTTPS.

What should a solutions architect do to meet this requirement?

- A. Update the ALB's network ACL to accept only HTTPS traffic
- B. Create a rule that replaces the HTTP in the URL with HTTPS.
- C. Create a listener rule on the ALB to redirect HTTP traffic to HTTPS.
- D. Replace the ALB with a Network Load Balancer configured to use Server Name Indication (SNI).

Answer: C

Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/elb-redirect-http-to-https-using-alb/>

How can I redirect HTTP requests to HTTPS using an Application Load Balancer? Last updated: 2020-10-30 I want to redirect HTTP requests to HTTPS using Application Load Balancer listener rules. How can I do this? Resolution Reference: <https://aws.amazon.com/premiumsupport/knowledge-center/elb-redirect-http-to-https-using-alb/>

NEW QUESTION 35

- (Topic 1)

A company is launching a new application and will display application metrics on an Amazon CloudWatch dashboard. The company's product manager needs to access this dashboard periodically. The product manager does not have an AWS account. A solution architect must provide access to the product manager by following the principle of least privilege.

Which solution will meet these requirements?

- A. Share the dashboard from the CloudWatch console
- B. Enter the product manager's email address, and complete the sharing step
- C. Provide a shareable link for the dashboard to the product manager.

- D. Create an IAM user specifically for the product manager
- E. Attach the CloudWatch Read Only Access managed policy to the user
- F. Share the new login credential with the product manager
- G. Share the browser URL of the correct dashboard with the product manager
- H. Create an IAM user for the company's employees, Attach the View Only Access AWS managed policy to the IAM user
- I. Share the new login credentials with the product manager
- J. Ask the product manager to navigate to the CloudWatch console and locate the dashboard by name in the Dashboards section.
- K. Deploy a bastion server in a public subnet
- L. When the product manager requires access to the dashboard, start the server and share the RDP credential
- M. On the bastion server, ensure that the browser is configured to open the dashboard URL with cached AWS credentials that have appropriate permissions to view the dashboard.

Answer: B

Explanation:

To provide the product manager access to the Amazon CloudWatch dashboard while following the principle of least privilege, a solution architect should create an IAM user specifically for the product manager and attach the CloudWatch Read Only Access managed policy to the user. This policy allows the user to view the dashboard without being able to make any changes to it. The solution architect should then share the new login credential with the product manager and provide them with the browser URL of the correct dashboard.

NEW QUESTION 36

- (Topic 1)

A company has a large Microsoft SharePoint deployment running on-premises that requires Microsoft Windows shared file storage. The company wants to migrate this workload to the AWS Cloud and is considering various storage options. The storage solution must be highly available and integrated with Active Directory for access control.

Which solution will satisfy these requirements?

- A. Configure Amazon EFS storage and set the Active Directory domain for authentication
- B. Create an SMB Me share on an AWS Storage Gateway file gateway in two Availability Zones
- C. Create an Amazon S3 bucket and configure Microsoft Windows Server to mount it as a volume
- D. Create an Amazon FSx for Windows File Server file system on AWS and set the Active Directory domain for authentication

Answer: D

NEW QUESTION 38

- (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 42

- (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 46

- (Topic 1)

A company needs to keep user transaction data in an Amazon DynamoDB table. The company must retain the data for 7 years.

What is the MOST operationally efficient solution that meets these requirements?

- A. Use DynamoDB point-in-time recovery to back up the table continuously.
- B. Use AWS Backup to create backup schedules and retention policies for the table.
- C. Create an on-demand backup of the table by using the DynamoDB console
- D. Store the backup in an Amazon S3 bucket
- E. Set an S3 Lifecycle configuration for the S3 bucket.
- F. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to invoke an AWS Lambda function
- G. Configure the Lambda function to back up the table and to store the backup in an Amazon S3 bucket
- H. Set an S3 Lifecycle configuration for the S3 bucket.

Answer: C

NEW QUESTION 51

- (Topic 1)

A company is implementing a shared storage solution for a media application that is hosted in the AWS Cloud. The company needs the ability to use SMB clients to access data. The solution must be fully managed.

Which AWS solution meets these requirements?

- A. Create an AWS Storage Gateway volume gateway
- B. Create a file share that uses the required client protocol. Connect the application server to the file share.
- C. Create an AWS Storage Gateway tape gateway. Configure it to use Amazon S3. Connect the application server to the tape gateway.
- D. Create an Amazon EC2 Windows instance. Install and configure a Windows file share role on the instance.
- E. Connect the application server to the file share.
- F. Create an Amazon FSx for Windows File Server file system. Attach the file system to the origin server.
- G. Connect the application server to the file system.

Answer: D

Explanation:

<https://aws.amazon.com/fsx/lustre/>

Amazon FSx has native support for Windows file system features and for the industry-standard Server Message Block (SMB) protocol to access file storage over a network. <https://docs.aws.amazon.com/fsx/latest/WindowsGuide/what-is.html>

NEW QUESTION 56

- (Topic 1)

A company recently launched Linux-based application instances on Amazon EC2 in a private subnet and launched a Linux-based bastion host on an Amazon EC2 instance in a public subnet of a VPC. A solutions architect needs to connect from the on-premises

network, through the company's internet connection to the bastion host and to the application servers. The solutions architect must make sure that the security groups of all the EC2 instances will allow that access.

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

- A. Replace the current security group of the bastion host with one that only allows inbound access from the application instances.
- B. Replace the current security group of the bastion host with one that only allows inbound access from the internal IP range for the company.
- C. Replace the current security group of the bastion host with one that only allows inbound access from the external IP range for the company.
- D. Replace the current security group of the application instances with one that allows inbound SSH access from only the private IP address of the bastion host.
- E. Replace the current security group of the application instances with one that allows inbound SSH access from only the public IP address of the bastion host.

Answer: CD

Explanation:

<https://digitalcloud.training/ssh-into-ec2-in-private-subnet/>

NEW QUESTION 61

- (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 URL.
- 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 name.
- D. Point the alias record to the Regional API Gateway stage endpoint.
- 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 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 suite & other Options 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 67

- (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 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 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 need 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 71

- (Topic 1)

A company needs to review its AWS Cloud deployment to ensure that its Amazon S3 buckets do not have unauthorized configuration changes.

What should a solutions architect do to accomplish this goal?

- A. Turn on AWS Config with the appropriate rules.
- B. Turn on AWS Trusted Advisor with the appropriate checks.
- C. Turn on Amazon Inspector with the appropriate assessment template.
- D. Turn on Amazon S3 server access logging.
- E. Configure Amazon EventBridge (Amazon Cloud Watch Events).

Answer: A

Explanation:

To ensure that Amazon S3 buckets do not have unauthorized configuration changes, a solutions architect should turn on AWS Config with the appropriate rules. AWS Config is a service that allows users to audit and assess their AWS resource configurations for compliance with industry standards and internal policies. It

provides a detailed view of the resources and their configurations, including information on how the resources are related to each other. By turning on AWS Config with the appropriate rules, users can identify and remediate unauthorized configuration changes to their Amazon S3 buckets.

NEW QUESTION 72

- (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 77

- (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 81

- (Topic 1)

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

What should the solutions architect recommend?

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

Answer: C

Explanation:

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

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

NEW QUESTION 84

- (Topic 1)

A company that hosts its web application on AWS wants to ensure all Amazon EC2 instances, Amazon RDS DB instances, and Amazon Redshift clusters are configured with tags. The company wants to minimize the effort of configuring and operating this check.

What should a solutions architect do to accomplish this?

- A. Use AWS Config rules to define and detect resources that are not properly tagged.
- B. Use Cost Explorer to display resources that are not properly tagged.
- C. Tag those resources manually.
- D. Write API calls to check all resources for proper tag allocation.
- E. Periodically run the code on an EC2 instance.
- F. Write API calls to check all resources for proper tag allocation.
- G. Schedule an AWS Lambda function through Amazon CloudWatch to periodically run the code.

Answer: A

Explanation:

To ensure all Amazon EC2 instances, Amazon RDS DB instances, and Amazon Redshift clusters are configured with tags, a solutions architect should use AWS Config rules to define and detect resources that are not properly tagged. AWS Config rules are a set of customizable rules that AWS Config uses to evaluate AWS resource configurations for compliance with best practices and company policies. Using AWS Config rules can minimize the effort of configuring and operating this check because it automates the process of identifying non-compliant resources and notifying the responsible teams. Reference:

AWS Config Developer Guide: AWS Config Rules (https://docs.aws.amazon.com/config/latest/developerguide/evaluate-config_use-managed-rules.html)

NEW QUESTION 89

- (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 94

- (Topic 1)

A company is developing a two-tier web application on AWS. The company's developers have deployed the application on an Amazon EC2 instance that connects directly to a backend Amazon RDS database. The company must not hardcode database credentials in the application. The company must also implement a solution to automatically rotate the database credentials on a regular basis.

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

- A. Store the database credentials in the instance metadata.
- B. Use Amazon EventBridge (Amazon CloudWatch Events) rules to run a scheduled AWS Lambda function that updates the RDS credentials and instance metadata at the same time.
- C. Store the database credentials in a configuration file in an encrypted Amazon S3 bucket.
- D. Use Amazon EventBridge (Amazon CloudWatch Events) rules to run a scheduled AWS Lambda function that updates the RDS credentials and the credentials in the configuration file at the same time.
- E. Use S3 Versioning to ensure the ability to fall back to previous values.
- F. Store the database credentials as a secret in AWS Secrets Manager.
- G. Turn on automatic rotation for the secret.

- H. Attach the required permission to the EC2 role to grant access to the secret.
- I. Store the database credentials as encrypted parameters in AWS Systems Manager Parameter Store
- J. Turn on automatic rotation for the encrypted parameter
- K. Attach the required permission to the EC2 role to grant access to the encrypted parameters.

Answer: C

Explanation:

https://docs.aws.amazon.com/secretsmanager/latest/userguide/create_database_secret.html

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 3 years) which is not cost effective

NEW QUESTION 100

- (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 102

- (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 106

- (Topic 1)

A company receives 10 TB of instrumentation data each day from several machines located at a single factory. The data consists of JSON files stored on a storage area network (SAN) in an on-premises data center located within the factory. The company wants to send this data to Amazon S3 where it can be accessed by several additional systems that provide critical near-real-time analytics. A secure transfer is important because the data is considered sensitive. Which solution offers the MOST reliable data transfer?

- A. AWS DataSync over public internet
- B. AWS DataSync over AWS Direct Connect
- C. AWS Database Migration Service (AWS DMS) over public internet
- D. AWS Database Migration Service (AWS DMS) over AWS Direct Connect

Answer: B

Explanation:

These are some of the main use cases for AWS DataSync: • Data migration
– Move active datasets rapidly over the network into Amazon S3, Amazon EFS, or FSx for Windows File Server. DataSync includes automatic encryption and data integrity validation to help make sure that your data arrives securely, intact, and ready to use.

"DataSync includes encryption and integrity validation to help make sure your data arrives securely, intact, and ready to use."

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

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 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 113

- (Topic 1)

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

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

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

Answer: B

Explanation:

The storage solution that will meet these requirements most cost-effectively is B: Create an S3 Lifecycle configuration to transition objects from S3 Standard to S3 Glacier Deep Archive after 1 month. Amazon S3 Glacier Deep Archive is a secure, durable, and extremely low-cost Amazon S3 storage class for long-term retention of data that is rarely accessed and for which retrieval times of several hours are acceptable. It is the lowest-cost storage option in Amazon S3, making it a cost-effective choice for storing backup files that are not accessed after 1 month. You can use an S3 Lifecycle configuration to automatically transition objects from S3 Standard to S3 Glacier Deep Archive after 1 month. This will minimize the storage costs for the backup files that are not accessed frequently.

NEW QUESTION 115

- (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 116

- (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 119

- (Topic 1)

A company is designing an application where users upload small files into Amazon S3. After a user uploads a file, the file requires one-time simple processing to transform the data and save the data in JSON format for later analysis.

Each file must be processed as quickly as possible after it is uploaded. Demand will vary. On some days, users will upload a high number of files. On other days, users will upload a few files or no files.

Which solution meets these requirements with the LEAST operational overhead?

- A. Configure Amazon EMR to read text files from Amazon S3. Run processing scripts to transform the data.
- B. Store the resulting JSON file in an Amazon Aurora DB cluster.
- C. Configure Amazon S3 to send an event notification to an Amazon Simple Queue Service (Amazon SQS) queue.
- D. Use Amazon EC2 instances to read from the queue and process the data.
- E. Store the resulting JSON file in Amazon DynamoDB.
- F. Configure Amazon S3 to send an event notification to an Amazon Simple Queue Service (Amazon SQS) queue.
- G. Use an AWS Lambda function to read from the queue and process the data.
- H. Store the resulting JSON file in Amazon DynamoDB.
- I. Most Voted
- J. Configure Amazon EventBridge (Amazon CloudWatch Events) to send an event to Amazon Kinesis Data Streams when a new file is uploaded.
- K. Use an AWS Lambda function to consume the event from the stream and process the data.
- L. Store the resulting JSON file in Amazon Aurora DB cluster.

Answer: C

Explanation:

Amazon S3 sends event notifications about S3 buckets (for example, object created, object removed, or object restored) to an SNS topic in the same Region. The SNS topic publishes the event to an SQS queue in the central Region. The SQS queue is configured as the event source for your Lambda function and buffers the event messages for the Lambda function. The Lambda function polls the SQS queue for messages and processes the Amazon S3 event notifications according to your application's requirements. <https://docs.aws.amazon.com/prescriptive-guidance/latest/patterns/subscribe-a-lambda-function-to-event-notifications-from-s3-buckets-in-different-aws-regions.html>

NEW QUESTION 123

- (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 127

- (Topic 1)

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

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

Answer: A

Explanation:

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

NEW QUESTION 128

- (Topic 1)

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

- A. Use AWS Secrets Manager
- B. Turn on automatic rotation.
- C. Use AWS Systems Manager Parameter Store
- D. Turn on automatic rotation.
- E. Create an Amazon S3 bucket to store objects that are encrypted with an AWS Key Management Service (AWS KMS) encryption key
- F. Migrate the credential file to the S3 bucket
- G. Point the application to the S3 bucket.
- H. Create an encrypted Amazon Elastic Block Store (Amazon EBS) volume (or each EC2 instance)
- I. Attach the new EBS volume to each EC2 instance
- J. Migrate the credential file to the new EBS volume
- K. 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 132

- (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 137

- (Topic 1)

A company runs its Infrastructure on AWS and has a registered base of 700,000 users for a document management application. The company intends to create a product that converts large PDF files to JPG images. The PDF files average 5 MB in size. The company needs to store the original files and the converted files. A solutions architect must design a scalable solution to accommodate demand that will grow rapidly over time.

Which solution meets these requirements MOST cost-effectively?

- A. Save the PDF files to Amazon S3. Configure an S3 PUT event to invoke an AWS Lambda function to convert the files to JPG format and store them back in Amazon S3.
- B. Save the PDF files to Amazon DynamoDB.
- C. Use the DynamoDB Streams feature to invoke an AWS Lambda function to convert the files to JPG format and store them back in DynamoDB.
- D. Upload the PDF files to an AWS Elastic Beanstalk application that includes Amazon EC2 instances.
- E. Amazon Elastic Block Store (Amazon EBS) storage and an Auto Scaling group.
- F. Use a program in the EC2 instances to convert the files to JPG format. Save the PDF files and the JPG files in the EBS store.
- G. Upload the PDF files to an AWS Elastic Beanstalk application that includes Amazon EC2 instances, Amazon Elastic File System (Amazon EFS) storage, and an Auto Scaling group.
- H. Use a program in the EC2 instances to convert the files to JPG format. Save the PDF files and the JPG files in the EBS store.

Answer: A

Explanation:

Elastic Beanstalk is expensive, and DocumentDB has a 400KB max to upload files. So Lambda and S3 should be the one.

NEW QUESTION 139

- (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 Regions.
- B. Use Amazon Route 53 health checks to redirect traffic.
- C. Use Amazon Aurora PostgreSQL Cross-Region Replication.
- D. Configure the Auto Scaling group to use multiple Availability Zones.
- E. Configure the database as Multi-AZ.
- F. Configure an Amazon RDS Proxy instance for the database.
- G. Configure the Auto Scaling group to use one Availability Zone.
- H. Generate hourly snapshots of the database.
- I. Recover the database from the snapshots in the event of a failure.
- J. Configure the Auto Scaling group to use multiple AWS Regions.
- 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 142

- (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 layer
- 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 group
- 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 group
- 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 144

- (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 147

- (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 152

- (Topic 2)

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

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

Answer: B

Explanation:

This solution meets the requirements of directing users to a backup static error page if the primary website is unavailable, minimizing changes and infrastructure overhead. Route 53 active-passive failover configuration can route traffic to a primary resource when it is healthy or to a secondary resource when the primary resource is unhealthy. Route 53 health checks can monitor the health of the ALB endpoint and trigger the failover when needed. The static error page can be hosted in an S3 bucket that is configured as a website, which is a simple and cost-effective way to serve static content.

Option A is incorrect because using a latency routing policy can route traffic based on the lowest network latency for users, but it does not provide failover functionality. Option C is incorrect because using an active-active configuration with the ALB and an EC2 instance can increase the infrastructure overhead and complexity, and it does not guarantee that the EC2 instance will always be healthy. Option D is incorrect because using a multivalued answer routing policy can return multiple values for a query, but it does not provide failover functionality.

References:

? <https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/routing-policy-failover.html>

? <https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/dns-failover.html>

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

NEW QUESTION 156

- (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 so 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 158

- (Topic 2)

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

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

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

Answer: AC

Explanation:

https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scps_examples_vpc.html#example_vpc_2

NEW QUESTION 160

- (Topic 2)

A company has a multi-tier application that runs six front-end web servers in an Amazon EC2 Auto Scaling group in a single Availability Zone behind an Application Load Balancer (ALB). A solutions architect needs to modify the infrastructure to be highly available without modifying the application.

Which architecture should the solutions architect choose that provides high availability?

- A. Create an Auto Scaling group that uses three instances across each of two Regions.
- B. Modify the Auto Scaling group to use three instances across each of two Availability Zones.
- C. Create an Auto Scaling template that can be used to quickly create more instances in another Region.
- D. Change the ALB in front of the Amazon EC2 instances in a round-robin configuration to balance traffic to the web tier.

Answer: B

Explanation:

High availability can be enabled for this architecture quite simply by modifying the existing Auto Scaling group to use multiple availability zones. The ASG will automatically balance the load so you don't actually need to specify the instances per AZ.

NEW QUESTION 161

- (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 162

- (Topic 2)

A solutions architect needs to help a company optimize the cost of running an application on AWS. The application will use Amazon EC2 instances, AWS Fargate, and AWS Lambda for compute within the architecture.

The EC2 instances will run the data ingestion layer of the application. EC2 usage will be sporadic and unpredictable. Workloads that run on EC2 instances can be interrupted at any time. The application front end will run on Fargate, and Lambda will serve the API layer. The front-end utilization and API layer utilization will be predictable over the course of the next year.

Which combination of purchasing options will provide the MOST cost-effective solution for hosting this application? (Choose two.)

- A. Use Spot Instances for the data ingestion layer
- B. Use On-Demand Instances for the data ingestion layer
- C. Purchase a 1-year Compute Savings Plan for the front end and API layer.
- D. Purchase 1-year All Upfront Reserved instances for the data ingestion layer.
- E. Purchase a 1-year EC2 instance Savings Plan for the front end and API layer.

Answer: AC

Explanation:

EC2 instance Savings Plan saves 72% while Compute Savings Plans saves 66%. But according to link, it says "Compute Savings Plans provide the most flexibility and help to reduce your costs by up to 66%. These plans automatically apply to EC2 instance usage regardless of instance family, size, AZ, region, OS or tenancy, and also apply to Fargate and Lambda usage." EC2 instance Savings Plans are not applied to Fargate or Lambda

NEW QUESTION 167

- (Topic 2)

A company wants to use the AWS Cloud to make an existing application highly available and resilient. The current version of the application resides in the company's data center. The application recently experienced data loss after a database server crashed because of an unexpected power outage.

The company needs a solution that avoids any single points of failure. The solution must give the application the ability to scale to meet user demand.

Which solution will meet these requirements?

- A. Deploy the application servers by using Amazon EC2 instances in an Auto Scaling group across multiple Availability Zones
- B. Use an Amazon RDS DB instance in a Multi-AZ configuration.
- C. Deploy the application servers by using Amazon EC2 instances in an Auto Scaling group in a single Availability Zone
- D. Deploy the database on an EC2 instance
- E. Enable EC2 Auto Recovery.
- F. Deploy the application servers by using Amazon EC2 instances in an Auto Scaling group across multiple Availability Zones
- G. Use an Amazon RDS DB instance with a read replica in a single Availability Zone
- H. Promote the read replica to replace the primary DB instance if the primary DB instance fails.
- I. Deploy the application servers by using Amazon EC2 instances in an Auto Scaling group across multiple Availability Zones Deploy the primary and secondary database servers on EC2 instances across multiple Availability Zones Use Amazon Elastic Block Store (Amazon EBS) Multi-Attach to create shared storage between the instances.

Answer: A

Explanation:

Deploy the application servers by using Amazon EC2 instances in an Auto Scaling group across multiple Availability Zones. Use an Amazon RDS DB instance in a Multi-AZ configuration. To make an existing application highly available and resilient while avoiding any single points of failure and giving the application the ability to scale to meet user demand, the best solution would be to deploy the application servers using Amazon EC2 instances in an Auto Scaling group across multiple Availability Zones and use an Amazon RDS DB instance in a Multi-AZ configuration. By using an Amazon RDS DB instance in a Multi-AZ configuration, the database is automatically replicated across multiple Availability Zones, ensuring that the database is highly available and can withstand the failure of a single Availability Zone. This provides fault tolerance and avoids any single points of failure.

NEW QUESTION 170

- (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 174

- (Topic 2)

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

Which storage solution meets these requirements MOST cost-effectively?

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

Answer: D

Explanation:

Amazon S3 is cheapest and can be accessed from anywhere.

NEW QUESTION 176

- (Topic 2)

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

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

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

Answer: B

Explanation:

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

NEW QUESTION 178

- (Topic 2)

A reporting team receives files each day in an Amazon S3 bucket. The reporting team manually reviews and copies the files from this initial S3 bucket to an analysis S3 bucket each day at the same time to use with Amazon QuickSight. Additional teams are starting to send more files in larger sizes to the initial S3 bucket.

The reporting team wants to move the files automatically to the analysis S3 bucket as the files enter the initial S3 bucket. The reporting team also wants to use AWS Lambda functions to run pattern-matching code on the copied data. In addition, the reporting team wants to send the data files to a pipeline in Amazon SageMaker Pipelines.

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

- A. Create a Lambda function to copy the files to the analysis S3 bucket
- B. Create an S3 event notification for the analysis S3 bucket
- C. Configure Lambda and SageMaker Pipelines as destinations of the event notification
- D. Configure s3objectCreated:Put as the event type.
- E. Create a Lambda function to copy the files to the analysis S3 bucket
- F. Configure the analysis S3 bucket to send event notifications to Amazon EventBridge (Amazon CloudWatch Events). Configure an ObjectCreated rule in EventBridge (CloudWatch Events). Configure Lambda and SageMaker Pipelines as targets for the rule.
- G. Configure S3 replication between the S3 bucket
- H. Create an S3 event notification for the analysis S3 bucket
- I. Configure Lambda and SageMaker Pipelines as destinations of the event notification
- J. Configure s3objectCreated:Put as the event type.
- K. Configure S3 replication between the S3 bucket
- L. Configure the analysis S3 bucket to send event notifications to Amazon EventBridge (Amazon CloudWatch Events). Configure an ObjectCreated rule in EventBridge (CloudWatch Events). Configure Lambda and SageMaker Pipelines as targets for the rule.

Answer: D

Explanation:

This solution meets the requirements of moving the files automatically, running Lambda functions on the copied data, and sending the data files to SageMaker Pipelines with the least operational overhead. S3 replication can copy the files from the initial S3 bucket to the analysis S3 bucket as they arrive. The analysis S3 bucket can send event notifications to Amazon EventBridge (Amazon CloudWatch Events) when an object is created. EventBridge can trigger Lambda and SageMaker Pipelines as targets for the ObjectCreated rule. Lambda can run pattern-matching code on the copied data, and SageMaker Pipelines can execute a pipeline with the data files.

Option A is incorrect because creating a Lambda function to copy the files to the analysis S3 bucket is not necessary when S3 replication can do that automatically. It also adds operational overhead to manage the Lambda function. Option B is incorrect because creating a Lambda function to copy the files to the analysis S3 bucket is not necessary when S3 replication can do that automatically. It also adds operational overhead to manage the Lambda function. Option C is incorrect because using S3 event notification with multiple destinations can result in throttling or delivery failures if there are too many events. References:

? <https://aws.amazon.com/blogs/machine-learning/automate-feature-engineering-pipelines-with-amazon-sagemaker/>

? <https://docs.aws.amazon.com/sagemaker/latest/dg/automating-sagemaker-with-eventbridge.html>

? <https://aws.amazon.com/about-aws/whats-new/2021/04/new-options-trigger-amazon-sagemaker-pipeline-executions/>

NEW QUESTION 181

- (Topic 2)

A company has an ecommerce checkout workflow that writes an order to a database and calls a service to process the payment. Users are experiencing timeouts during the checkout process. When users resubmit the checkout form, multiple unique orders are created for the same desired transaction.

How should a solutions architect refactor this workflow to prevent the creation of multiple orders?

- A. Configure the web application to send an order message to Amazon Kinesis Data Firehose
- B. Set the payment service to retrieve the message from Kinesis Data Firehose and process the order.
- C. Create a rule in AWS CloudTrail to invoke an AWS Lambda function based on the logged application path request Use Lambda to query the database, call the payment service, and pass in the order information.
- D. Store the order in the database
- E. Send a message that includes the order number to Amazon Simple Notification Service (Amazon SNS). Set the payment service to poll Amazon SNS
- F. retrieve the message, and process the order.
- G. Store the order in the database
- H. Send a message that includes the order number to an Amazon Simple Queue Service (Amazon SQS) FIFO queue
- I. Set the payment service to retrieve the message and process the order
- J. Delete the message from the queue.

Answer: D

Explanation:

This approach ensures that the order creation and payment processing steps are separate and atomic. By sending the order information to an SQS FIFO queue, the payment service can process the order one at a time and in the order they were received. If the payment service is unable to process an order, it can be retried later, preventing the creation of multiple orders. The deletion of the message from the queue after it is processed will prevent the same message from being processed multiple times.

NEW QUESTION 183

- (Topic 2)

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

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

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

Answer: B

Explanation:

SSE-S3 - is free and uses AWS owned CMKs (CMK = Customer Master Key). The encryption key is owned and managed by AWS, and is shared among many accounts. Its rotation is automatic with time that varies as shown in the table here. The time is not explicitly defined.

SSE-KMS - has two flavors:

AWS managed CMK. This is free CMK generated only for your account. You can only view its policies and audit usage, but not manage it. Rotation is automatic - once per 1095 days (3 years),

Customer managed CMK. This uses your own key that you create and can manage. Rotation is not enabled by default. But if you enable it, it will be automatically rotated every 1 year. This variant can also use an imported key material by you. If you create such key with an imported material, there is no automated rotation. Only manual rotation.

SSE-C - customer provided key. The encryption key is fully managed by you outside of AWS. AWS will not rotate it.

This solution meets the requirements of moving data to an Amazon S3 bucket, encrypting the data when it is stored in the S3 bucket, and automatically rotating the encryption key every year with the least operational overhead. AWS Key Management Service (AWS KMS) is a service that enables you to create and manage encryption keys for your data. A customer managed key is a symmetric encryption key that you create and manage in AWS KMS. You can enable automatic key rotation for a customer managed key, which means that AWS KMS generates new cryptographic material for the key every year. You can set the S3 bucket's default encryption behavior to use the customer managed KMS key, which means that any object that is uploaded to the bucket without specifying an encryption method will be encrypted with that key.

Option A is incorrect because using server-side encryption with Amazon S3 managed encryption keys (SSE-S3) does not allow you to control or manage the encryption keys. SSE-S3 uses a unique key for each object, and encrypts that key with a master key that is regularly rotated by S3. However, you cannot enable or

disable key rotation for SSE-S3 keys, or specify the rotation interval. Option C is incorrect because manually rotating the KMS key every year can increase the operational overhead and complexity, and it may not meet the requirement of rotating the key every year if you forget or delay the rotation process. Option D is incorrect because encrypting the data with customer key material before moving the data to the S3 bucket can increase the operational overhead and complexity, and it may not provide consistent encryption for all objects in the bucket. Creating a KMS key without key material and importing the customer key material into the KMS key can enable you to use your own source of random bits to generate your KMS keys, but it does not support automatic key rotation.

References:

? <https://docs.aws.amazon.com/kms/latest/developerguide/concepts.html>

? <https://docs.aws.amazon.com/kms/latest/developerguide/rotate-keys.html>

? <https://docs.aws.amazon.com/AmazonS3/latest/userguide/bucket-encryption.html>

NEW QUESTION 188

- (Topic 2)

A company wants to move its application to a serverless solution. The serverless solution needs to analyze existing and new data by using SL. The company stores the data in an Amazon S3 bucket. The data requires encryption and must be replicated to a different AWS Region.

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

- A. Create a new S3 bucket
- B. Load the data into the new S3 bucket
- C. Use S3 Cross-Region Replication (CRR) to replicate encrypted objects to an S3 bucket in another Region
- D. Use server-side encryption with AWS KMS multi-Region keys (SSE-KMS). Use Amazon Athena to query the data.
- E. Create a new S3 bucket
- F. Load the data into the new S3 bucket
- G. Use S3 Cross-Region Replication (CRR) to replicate encrypted objects to an S3 bucket in another Region
- H. Use server-side encryption with AWS KMS multi-Region keys (SSE-KMS). Use Amazon RDS to query the data.
- I. Load the data into the existing S3 bucket
- J. Use S3 Cross-Region Replication (CRR) to replicate encrypted objects to an S3 bucket in another Region
- K. Use server-side encryption with Amazon S3 managed encryption keys (SSE-S3). Use Amazon Athena to query the data.
- L. Load the data into the existing S3 bucket
- M. Use S3 Cross-Region Replication (CRR) to replicate encrypted objects to an S3 bucket in another Region
- N. Use server-side encryption with Amazon S3 managed encryption keys (SSE-S3). Use Amazon RDS to query the data.

Answer: A

Explanation:

This solution meets the requirements of a serverless solution, encryption, replication, and SQL analysis with the least operational overhead. Amazon Athena is a serverless interactive query service that can analyze data in S3 using standard SQL. S3 Cross-Region Replication (CRR) can replicate encrypted objects to an S3 bucket in another Region automatically. Server-side encryption with AWS KMS multi-Region keys (SSE-KMS) can encrypt the data at rest using keys that are replicated across multiple Regions. Creating a new S3 bucket can avoid potential conflicts with existing data or configurations.

Option B is incorrect because Amazon RDS is not a serverless solution and it cannot query data in S3 directly. Option C is incorrect because server-side encryption with Amazon S3 managed encryption keys (SSE-S3) does not use KMS keys and it does not support multi-Region replication. Option D is incorrect because Amazon RDS is not a serverless solution and it cannot query data in S3 directly. It is also incorrect for the same reason as option C. References:

? <https://docs.aws.amazon.com/AmazonS3/latest/userguide/replication-walkthrough-4.html>

? <https://aws.amazon.com/blogs/storage/considering-four-different-replication-options-for-data-in-amazon-s3/>

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

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

NEW QUESTION 191

- (Topic 2)

A solutions architect is creating a new Amazon CloudFront distribution for an application. Some of the information submitted by users is sensitive. The application uses HTTPS but needs another layer of security. The sensitive information should be protected throughout the entire application stack, and access to the information should be restricted to certain applications.

Which action should the solutions architect take?

- A. Configure a CloudFront signed URL.
- B. Configure a CloudFront signed cookie.
- C. Configure a CloudFront field-level encryption profile.
- D. Configure CloudFront and set the Origin Protocol Policy setting to HTTPS Only for the Viewer Protocol Policy.

Answer: C

Explanation:

<https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/field-level-encryption.html>

"With Amazon CloudFront, you can enforce secure end-to-end connections to origin servers by using HTTPS. Field-level encryption adds an additional layer of security that lets you protect specific data throughout system processing so that only certain applications can see it."

NEW QUESTION 194

- (Topic 2)

An entertainment company is using Amazon DynamoDB to store media metadata. The application is read intensive and experiencing delays. The company does not have staff to handle additional operational overhead and needs to improve the performance efficiency of DynamoDB without reconfiguring the application.

What should a solutions architect recommend to meet this requirement?

- A. Use Amazon ElastiCache for Redis.
- B. Use Amazon DynamoDB Accelerator (DAX).
- C. Replicate data by using DynamoDB global tables.
- D. Use Amazon ElastiCache for Memcached with Auto Discovery enabled.

Answer: B

Explanation:

<https://aws.amazon.com/dynamodb/dax/>

NEW QUESTION 195

- (Topic 2)

A company runs workloads on AWS. The company needs to connect to a service from an external provider. The service is hosted in the provider's VPC. According to the company's security team, the connectivity must be private and must be restricted to the target service. The connection must be initiated only from the company's VPC.

Which solution will meet these requirements?

- A. Create a VPC peering connection between the company's VPC and the provider's VPC
- B. Update the route table to connect to the target service.
- C. Ask the provider to create a virtual private gateway in its VPC
- D. Use AWS PrivateLink to connect to the target service.
- E. Create a NAT gateway in a public subnet of the company's VPC
- F. Update the route table to connect to the target service.
- G. Ask the provider to create a VPC endpoint for the target service
- H. Use AWS PrivateLink to connect to the target service.

Answer: D

Explanation:

****AWS PrivateLink provides private connectivity between VPCs, AWS services, and your on-premises networks, without exposing your traffic to the public internet**.** AWS PrivateLink makes it easy to connect services across different accounts and VPCs to significantly simplify your network architecture. Interface

****VPC endpoints****, powered by AWS PrivateLink, connect you to services hosted by AWS Partners and supported solutions available in AWS Marketplace.

<https://aws.amazon.com/privatelink/>

NEW QUESTION 200

- (Topic 2)

A company has an AWS account used for software engineering. The AWS account has access to the company's on-premises data center through a pair of AWS Direct Connect connections. All non-VPC traffic routes to the virtual private gateway.

A development team recently created an AWS Lambda function through the console. The development team needs to allow the function to access a database that runs in a private subnet in the company's data center.

Which solution will meet these requirements?

- A. Configure the Lambda function to run in the VPC with the appropriate security group.
- B. Set up a VPN connection from AWS to the data center
- C. Route the traffic from the Lambda function through the VPN.
- D. Update the route tables in the VPC to allow the Lambda function to access the on-premises data center through Direct Connect.
- E. Create an Elastic IP address
- F. Configure the Lambda function to send traffic through the Elastic IP address without an elastic network interface.

Answer: A

Explanation:

<https://docs.aws.amazon.com/lambda/latest/dg/configuration-vpc.html#vpc-managing-eni>

NEW QUESTION 204

- (Topic 2)

A company runs a production application on a fleet of Amazon EC2 instances. The application reads the data from an Amazon SQS queue and processes the messages in parallel. The message volume is unpredictable and often has intermittent traffic. This application should continually process messages without any downtime.

Which solution meets these requirements MOST cost-effectively?

- A. Use Spot Instances exclusively to handle the maximum capacity required.
- B. Use Reserved Instances exclusively to handle the maximum capacity required.
- C. Use Reserved Instances for the baseline capacity and use Spot Instances to handle additional capacity.
- D. Use Reserved Instances for the baseline capacity and use On-Demand Instances to handle additional capacity.

Answer: D

Explanation:

We recommend that you use On-Demand Instances for applications with short-term, irregular workloads that cannot be interrupted.

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-on-demand-instances.html>

NEW QUESTION 207

- (Topic 2)

A corporation has recruited a new cloud engineer who should not have access to the CompanyConfidential Amazon S3 bucket. The cloud engineer must have read and write permissions on an S3 bucket named AdminTools.

Which IAM policy will satisfy these criteria?

A.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "s3:ListBucket",
      "Resource": "arn:aws:s3:::AdminTools"
    },
    {
      "Effect": "Allow",
      "Action": [ "s3:GetObject", "s3:PutObject" ],
      "Resource": "arn:aws:s3:::AdminTools/*"
    },
    {
      "Effect": "Deny",
      "Action": "s3:*",
      "Resource": [
        "arn:aws:s3:::CompanyConfidential/*",
        "arn:aws:s3:::CompanyConfidential"
      ]
    }
  ]
}
```

B.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "s3:ListBucket",
      "Resource": [
        "arn:aws:s3:::AdminTools",
        "arn:aws:s3:::CompanyConfidential/*"
      ]
    },
    {
      "Effect": "Allow",
      "Action": [ "s3:GetObject", "s3:PutObject", "s3>DeleteObject" ],
      "Resource": "arn:aws:s3:::AdminTools/*"
    },
    {
      "Effect": "Deny",
      "Action": "s3:*",
      "Resource": "arn:aws:s3:::CompanyConfidential"
    }
  ]
}
```

C.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [ "s3:GetObject", "s3:PutObject" ],
      "Resource": "arn:aws:s3:::AdminTools/*"
    },
    {
      "Effect": "Deny",
      "Action": "s3:*",
      "Resource": [
        "arn:aws:s3:::CompanyConfidential/*",
        "arn:aws:s3:::CompanyConfidential"
      ]
    }
  ]
}
```

```
D.
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "s3:ListBucket",
      "Resource": "arn:aws:s3:::AdminTools/*"
    },
    {
      "Effect": "Allow",
      "Action": [ "s3:GetObject", "s3:PutObject", "s3:DeleteObject" ],
      "Resource": "arn:aws:s3:::AdminTools/"
    },
    {
      "Effect": "Deny",
      "Action": "s3:*",
      "Resource": [
        "arn:aws:s3:::CompanyConfidential",
        "arn:aws:s3:::CompanyConfidential/*",
        "arn:aws:s3:::AdminTools/*"
      ]
    }
  ]
}
```

A.

Answer: A

Explanation:

https://docs.amazonaws.cn/en_us/IAM/latest/UserGuide/reference_policies_examples_s3_rw-bucket.html

The policy is separated into two parts because the ListBucket action requires permissions on the bucket while the other actions require permissions on the objects in the bucket. You must use two different Amazon Resource Names (ARNs) to specify bucket-level and object-level permissions. The first Resource element specifies arn:aws:s3:::AdminTools for the ListBucket action so that applications can list all objects in the AdminTools bucket.

NEW QUESTION 211

- (Topic 2)

A gaming company hosts a browser-based application on AWS. The users of the application consume a large number of videos and images that are stored in Amazon S3. This content is the same for all users.

The application has increased in popularity, and millions of users worldwide are accessing these media files. The company wants to provide the files to the users while reducing the load on the origin.

Which solution meets these requirements MOST cost-effectively?

- A. Deploy an AWS Global Accelerator accelerator in front of the web servers.
- B. Deploy an Amazon CloudFront web distribution in front of the S3 bucket.
- C. Deploy an Amazon ElastiCache for Redis instance in front of the web servers.
- D. Deploy an Amazon ElastiCache for Memcached instance in front of the web servers.

Answer: B

Explanation:

ElastiCache, enhances the performance of web applications by quickly retrieving information from fully-managed in-memory data stores. It utilizes Memcached and Redis, and manages to considerably reduce the time your applications would, otherwise, take to read data from disk-based databases. Amazon CloudFront supports dynamic content from HTTP and WebSocket protocols, which are based on the Transmission Control Protocol (TCP) protocol. Common use cases include dynamic API calls, web pages and web applications, as well as an application's static files such as audio and images. It also supports on-demand media streaming over HTTP. AWS Global Accelerator supports both User Datagram Protocol (UDP) and TCP-based protocols. It is commonly used for non- HTTP use cases, such as gaming, IoT and voice over IP. It is also good for HTTP use cases that need static IP addresses or fast regional failover

NEW QUESTION 216

- (Topic 2)

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

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

Answer: A

Explanation:

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

NEW QUESTION 220

- (Topic 2)

A company stores its application logs in an Amazon CloudWatch Logs log group. A new policy requires the company to store all application logs in Amazon OpenSearch Service (Amazon Elasticsearch Service) in near-real time. Which solution will meet this requirement with the LEAST operational overhead?

- A. Configure a CloudWatch Logs subscription to stream the logs to Amazon OpenSearch Service (Amazon Elasticsearch Service).
- B. Create an AWS Lambda function
- C. Use the log group to invoke the function to write the logs to Amazon OpenSearch Service (Amazon Elasticsearch Service).
- D. Create an Amazon Kinesis Data Firehose delivery stream
- E. Configure the log group as the delivery stream's source
- F. Configure Amazon OpenSearch Service (Amazon Elasticsearch Service) as the delivery stream's destination.
- G. Install and configure Amazon Kinesis Agent on each application server to deliver the logs to Amazon Kinesis Data Stream
- H. Configure Kinesis Data Streams to deliver the logs to Amazon OpenSearch Service (Amazon Elasticsearch Service)

Answer: B

Explanation:

<https://computingforgeeks.com/stream-logs-in-aws-from-cloudwatch-to-elasticsearch/>

NEW QUESTION 223

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