



Amazon-Web-Services

Exam Questions SAA-C03

AWS Certified Solutions Architect - Associate (SAA-C03)

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NEW QUESTION 1

- (Exam 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 2

- (Exam Topic 1)

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

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

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

Answer: A

Explanation:

You might want to use Transfer Acceleration on a bucket for various reasons, including the following: You have customers that upload to a centralized bucket from all over the world.

You transfer gigabytes to terabytes of data on a regular basis across continents.

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

<https://docs.aws.amazon.com/AmazonS3/latest/dev/transfer-acceleration.html> [https://aws.amazon.com/s3/transfer-acceleration/#:~:text=S3%20Transfer%20Acceleration%20\(S3TA\)%20redu](https://aws.amazon.com/s3/transfer-acceleration/#:~:text=S3%20Transfer%20Acceleration%20(S3TA)%20redu)

"Amazon S3 Transfer Acceleration can speed up content transfers to and from Amazon S3 by as much as 50-500% for long-distance transfer of larger objects. Customers who have either web or mobile applications with widespread users or applications hosted far away from their S3 bucket can experience long and variable upload and download speeds over the Internet"

<https://docs.aws.amazon.com/AmazonS3/latest/userguide/mpuoverview.html> "Improved throughput - You can upload parts in parallel to improve throughput."

NEW QUESTION 3

- (Exam Topic 1)

A company is designing an application. The application uses an AWS Lambda function to receive information through Amazon API Gateway and to store the information in an Amazon Aurora PostgreSQL database.

During the proof-of-concept stage, the company has to increase the Lambda quotas significantly to handle the high volumes of data that the company needs to load into the database. A solutions architect must recommend a new design to improve scalability and minimize the configuration effort.

Which solution will meet these requirements?

- A. Refactor the Lambda function code to Apache Tomcat code that runs on Amazon EC2 instances. Connect the database by using native Java Database Connectivity (JDBC) drivers.
- B. Change the platform from Aurora to Amazon DynamoDB
- C. Provision a DynamoDB Accelerator (DAX) cluster
- D. Use the DAX client SDK to point the existing DynamoDB API calls at the DAX cluster.
- E. Set up two Lambda function
- F. Configure one function to receive the information
- G. Configure the other function to load the information into the database
- H. Integrate the Lambda functions by using Amazon Simple Notification Service (Amazon SNS).
- I. Set up two Lambda function
- J. Configure one function to receive the information
- K. Configure the other function to load the information into the database
- L. Integrate the Lambda functions by using an Amazon Simple Queue Service (Amazon SQS) queue.

Answer: B

Explanation:

bottlenecks can be avoided with queues (SQS).

NEW QUESTION 4

- (Exam Topic 1)

A company is preparing to store confidential data in Amazon S3. For compliance reasons, the data must be encrypted at rest. Encryption key usage must be logged.

for auditing purposes. Keys must be rotated every year.

Which solution meets these requirements and «the MOST operationally efferent?

- A. Server-side encryption with customer-provided keys (SSE-C)
- B. Server-side encryption with Amazon S3 managed keys (SSE-S3)
- C. Server-side encryption with AWS KMS (SSE-KMS) customer master keys (CMKs) with manual rotation
- D. Server-side encryption with AWS KMS (SSE-KMS) customer master keys (CMKs) with automate rotation

Answer: D

Explanation:

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

When you enable automatic key rotation for a customer managed key, AWS KMS generates new cryptographic material for the KMS key every year. AWS KMS also saves the KMS key's older cryptographic material in perpetuity so it can be used to decrypt data that the KMS key encrypted.

Key rotation in AWS KMS is a cryptographic best practice that is designed to be transparent and easy to use. AWS KMS supports optional automatic key rotation only for customer managed CMKs. Enable and disable key rotation. Automatic key rotation is disabled by default on customer managed CMKs. When you enable (or re-enable) key rotation, AWS KMS automatically rotates the CMK 365 days after the enable date and every 365 days thereafter.

NEW QUESTION 5

- (Exam Topic 1)

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

Which AWS solution meets these requirements?

- A. Create an AWS Storage Gateway volume gatewa
- 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 (apes to use Amazon S3 Connect the application server lo the tape gateway
- D. Create an Amazon EC2 Windows instance Install and configure a Windows file share role on the instanc
- E. Connect the application server to the file share.
- F. Create an Amazon FSx for Windows File Server tile system Attach the fie system to the origin server.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 6

- (Exam Topic 1)

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

What should a solutions architect do to meet these requirements?

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

Answer: B

NEW QUESTION 7

- (Exam 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 conten
- B. Use human review for low-confidence predictions.
- C. Use Amazon Rekognition to detect inappropriate conten
- D. Use human review for low-confidence predictions.
- E. Use Amazon SageMaker to detect inappropriate conten
- F. Use ground truth to label low-confidence predictions.
- G. Use AWS Fargate to deploy a custom machine learning model to detect inappropriate conten
- 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 8

- (Exam Topic 1)

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

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

- A. Configure S3 Intelligent-Tiering to automatically migrate objects.
- B. Create an S3 Lifecycle configuration to transition objects from S3 Standard to S3 Glacier Deep Archive after 1 month.

- C. Create an S3 Lifecycle configuration to transition objects from S3 Standard to S3 Standard-Infrequent Access (S3 Standard-IA) after 1 month.
- D. Create an S3 Lifecycle configuration to transition objects from S3 Standard to S3 One Zone-Infrequent Access (S3 One Zone-IA) after 1 month.

Answer: B

NEW QUESTION 9

- (Exam Topic 1)

An ecommerce company wants to launch a one-deal-a-day website on AWS. Each day will feature exactly one product on sale for a period of 24 hours. The company wants to be able to handle millions of requests each hour with millisecond latency during peak hours. Which solution will meet these requirements with the LEAST operational overhead?

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

Answer: D

NEW QUESTION 10

- (Exam Topic 1)

A company's HTTP application is behind a Network Load Balancer (NLB). The NLB's target group is configured to use an Amazon EC2 Auto Scaling group with multiple EC2 instances that run the web service.

The company notices that the NLB is not detecting HTTP errors for the application. These errors require a manual restart of the EC2 instances that run the web service. The company needs to improve the application's availability without writing custom scripts or code.

What should a solutions architect do to meet these requirements?

- A. Enable HTTP health checks on the NL
- B. supplying the URL of the company's application.
- C. Add a cron job to the EC2 instances to check the local application's logs once each minut
- D. If HTTP errors are detected, the application will restart.
- E. Replace the NLB with an Application Load Balance
- F. Enable HTTP health checks by supplying the URL of the company's applicatio
- G. Configure an Auto Scaling action to replace unhealthy instances.
- H. Create an Amazon Cloud Watch alarm that monitors the UnhealthyHostCount metric for the NL
- I. Configure an Auto Scaling action to replace unhealthy instances when the alarm is in the ALARM state.

Answer: C

NEW QUESTION 10

- (Exam 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 tile 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 14

- (Exam Topic 1)

A company's containerized application runs on an Amazon EC2 instance. The application needs to download security certificates before it can communicate with other business applications. The company wants a highly secure solution to encrypt and decrypt the certificates in near real time. The solution also needs to store data in highly available storage after the data is encrypted.

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

- A. Create AWS Secrets Manager secrets for encrypted certificate
- B. Manually update the certificates as neede
- C. Control access to the data by using fine-grained IAM access.
- D. Create an AWS Lambda function that uses the Python cryptography library to receive and perform encryption operation
- E. Store the function in an Amazon S3 bucket.
- F. Create an AWS Key Management Service (AWS KMS) customer managed ke
- G. Allow the EC2 role to use the KMS key for encryption operation
- H. Store the encrypted data on Amazon S3.
- I. Create an AWS Key Management Service (AWS KMS) customer managed ke
- J. Allow the EC2 role to use the KMS key for encryption operation
- K. Store the encrypted data on Amazon Elastic Block Store (Amazon EBS) volumes.

Answer: D

NEW QUESTION 16

- (Exam Topic 1)

A company provides a Voice over Internet Protocol (VoIP) service that uses UDP connections. The service consists of Amazon EC2 instances that run in an Auto Scaling group. The company has deployments across multiple AWS Regions.

The company needs to route users to the Region with the lowest latency. The company also needs automated failover between Regions.

Which solution will meet these requirements?

- A. Deploy a Network Load Balancer (NLB) and an associated target group
- B. Associate the target group with the Auto Scaling group
- C. Use the NLB as an AWS Global Accelerator endpoint in each Region.
- D. Deploy an Application Load Balancer (ALB) and an associated target group
- E. Associate the target group with the Auto Scaling group
- F. Use the ALB as an AWS Global Accelerator endpoint in each Region.
- G. Deploy a Network Load Balancer (NLB) and an associated target group
- H. Associate the target group with the Auto Scaling group
- I. Create an Amazon Route 53 latency record that points to aliases for each NL
- J. Create an Amazon CloudFront distribution that uses the latency record as an origin.
- K. Deploy an Application Load Balancer (ALB) and an associated target group
- L. Associate the target group with the Auto Scaling group
- M. Create an Amazon Route 53 weighted record that points to aliases for each AL
- N. Deploy an Amazon CloudFront distribution that uses the weighted record as an origin.

Answer: D

Explanation:

<https://aws.amazon.com/global-accelerator/faqs/>

HTTP /HTTPS - ALB ; TCP and UDP - NLB; Lowest latency routing and more throughput. Also supports failover, uses Anycast Ip addressing - Global Accelerator Caching at Edge Locations – Cloudfront

WS Global Accelerator automatically checks the health of your applications and routes user traffic only to healthy application endpoints. If the health status changes or you make configuration updates, AWS Global Accelerator reacts instantaneously to route your users to the next available endpoint..

NEW QUESTION 21

- (Exam Topic 1)

A company runs its Infrastructure on AWS and has a registered base of 700.000 users for res document management application The company intends to create a product that converts large pdf files to jpg Imago files. 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 DynamoD
- C. Use the DynamoDB Streams feature to invoke an AWS Lambda function to convert the files to jpg format and store them hack in DynamoDB
- D. Upload the pdf files to an AWS Elastic Beanstalk application that includes Amazon EC2 instances.Amazon Elastic Block Store (Amazon EBS) storage and an Auto Scaling group
- E. 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.
- F. Upload the .pdf files to an AWS Elastic Beanstalk application that includes Amazon EC2 instances, Amazon Elastic File System (Amazon EPS) storage, and an Auto Scaling group
- G. Use a program in the EC2 instances to convert the file 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 26

- (Exam Topic 1)

A company needs guaranteed Amazon EC2 capacity in three specific Availability Zones in a specific AWS Region for an upcoming event that will last 1 week.

What should the company do to guarantee the EC2 capacity?

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

Answer: D

Explanation:

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-capacity-reservations.html>

Reserve instances: You will have to pay for the whole term (1 year or 3years) which is not cost effective

NEW QUESTION 30

- (Exam Topic 1)

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

Which solution meets these requirements?

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

- F. Attach the security group to an Amazon RDS DB instance.
- G. Create a new peering connection between the public subnets and the private subnet
- H. Create a different peering connection between the private subnets and the database subnets.

Answer: C

Explanation:

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

"You can specify allow rules, but not deny rules." "When you first create a security group, it has no inbound rules. Therefore, no inbound traffic originating from another host to your instance is allowed until you add inbound rules to the security group." Source:
https://docs.aws.amazon.com/vpc/latest/userguide/VPC_SecurityGroups.html#VPCSecurityGroups

NEW QUESTION 34

- (Exam Topic 1)

A company is storing sensitive user information in an Amazon S3 bucket The company wants to provide secure access to this bucket from the application tier running on Amazon EC2 instances inside a VPC.

Which combination of steps should a solutions architect take to accomplish this? (Select TWO.)

- A. Configure a VPC gateway endpoint for Amazon S3 within the VPC
- B. Create a bucket policy to make the objects to the S3 bucket public
- C. Create a bucket policy that limits access to only the application tier running in the VPC
- D. Create an IAM user with an S3 access policy and copy the IAM credentials to the EC2 instance
- E. Create a NAT instance and have the EC2 instances use the NAT instance to access the S3 bucket

Answer: AC

Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/s3-private-connection-no-authentication/>

NEW QUESTION 37

- (Exam 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

NEW QUESTION 41

- (Exam Topic 1)

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

Which solution meets these requirements MOST cost-effectively?

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

Answer: C

NEW QUESTION 42

- (Exam Topic 1)

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

What should a solutions architect recommend to meet these requirements?

- A. Store the transactions data into Amazon DynamoDB Set up a rule in DynamoDB to remove sensitive data from every transaction upon write Use DynamoDB Streams to share the transactions data with other applications
- B. Stream the transactions data into Amazon Kinesis Data Firehose to store data in Amazon DynamoDB and Amazon S3 Use AWS Lambda integration with Kinesis Data Firehose to remove sensitive data

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

Answer: C

Explanation:

The destination of your Kinesis Data Firehose delivery stream. Kinesis Data Firehose can send data records to various destinations, including Amazon Simple Storage Service (Amazon S3), Amazon Redshift, Amazon OpenSearch Service, and any HTTP endpoint that is owned by you or any of your third-party service providers. The following are the supported destinations:

- * Amazon OpenSearch Service
- * Amazon S3
- * Datadog
- * Dynatrace
- * Honeycomb
- * HTTP Endpoint
- * Logic Monitor
- * MongoDB Cloud
- * New Relic
- * Splunk
- * Sumo Logic <https://docs.aws.amazon.com/firehose/latest/dev/create-name.html> <https://aws.amazon.com/kinesis/data-streams/>

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

NEW QUESTION 45

- (Exam 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 50

- (Exam Topic 1)

A company runs a highly available image-processing application on Amazon EC2 instances in a single VPC The EC2 instances run inside several subnets across multiple Availability Zones. The EC2 instances do not communicate with each other However, the EC2 instances download images from Amazon S3 and upload images to Amazon S3 through a single NAT gateway The company is concerned about data transfer charges

What is the MOST cost-effective way for the company to avoid Regional data transfer charges?

- A. Launch the NAT gateway in each Availability Zone
- B. Replace the NAT gateway with a NAT instance
- C. Deploy a gateway VPC endpoint for Amazon S3
- D. Provision an EC2 Dedicated Host to run the EC2 instances

Answer: A

NEW QUESTION 52

- (Exam Topic 1)

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

Which solution will meet these requirements?

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

- L. Generate reports by using Amazon Athena
- M. Publish the reports to Amazon S3. Use S3 bucket policies to limit access to the reports.

Answer: A

NEW QUESTION 53

- (Exam Topic 1)

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

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

Answer: B

Explanation:

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

NEW QUESTION 58

- (Exam 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 logs. 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 logs. Configure EC2 Auto Scaling based on the load on the compute nodes.

Answer: B

NEW QUESTION 60

- (Exam Topic 1)

A bicycle sharing company is developing a multi-tier architecture to track the location of its bicycles during peak operating hours. The company wants to use these data points in its existing analytics platform. A solutions architect must determine the most viable multi-tier option to support this architecture. The data points must be accessible from the REST API. Which action meets these requirements for storing and retrieving location data?

- A. Use Amazon Athena with Amazon S3.
- B. Use Amazon API Gateway with AWS Lambda.
- C. Use Amazon QuickSight with Amazon Redshift.
- D. Use Amazon API Gateway with Amazon Kinesis Data Analytics.

Answer: D

Explanation:

<https://aws.amazon.com/solutions/implementations/aws-streaming-data-solution-for-amazon-kinesis/>

NEW QUESTION 62

- (Exam Topic 1)

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

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

Answer: D

NEW QUESTION 67

- (Exam Topic 1)

A company runs an on-premises application that is powered by a MySQL database. The company is migrating the application to AWS to increase the application's elasticity and availability.

The current architecture shows heavy read activity on the database during times of normal operation. Every 4 hours, the company's development team pulls a full export of the production database to populate a database in the staging environment. During this period, users experience unacceptable application latency. The development team is unable to use the staging environment until the procedure completes.

A solutions architect must recommend replacement architecture that alleviates the application latency issue. The replacement architecture also must give the

development team the ability to continue using the staging environment without delay
Which solution meets these requirements?

- A. Use Amazon Aurora MySQL with Multi-AZ Aurora Replicas for productio
- B. Populate the staging database by implementing a backup and restore process that uses the mysqldump utility.
- C. Use Amazon Aurora MySQL with Multi-AZ Aurora Replicas for production Use database cloning to create the staging database on-demand
- D. Use Amazon RDS for MySQL with a Mufti AZ deployment and read replicas for production Use the standby instance tor the staging database.
- E. Use Amazon RDS for MySQL with a Multi-AZ deployment and read replicas for productio
- F. Populate the staging database by implementing a backup and restore process that uses the mysqldump utility.

Answer: B

Explanation:

<https://aws.amazon.com/blogs/aws/amazon-aurora-fast-database-cloning/>

NEW QUESTION 69

- (Exam 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 Retrieva
- B. Query the tags to retrieve the files from S3 Glacier Instant Retrieval.
- C. Store individual files in Amazon S3 Intelligent-Tierin
- D. Use S3 Lifecycle policies to move the files to S3 Glacier Flexible Retrieval after 1 yea
- E. Query and retrieve the files that are in Amazon S3 by using Amazon Athen
- 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 storag
- H. Store search metadata for each archive in Amazon S3 Standard storag
- I. Use S3 Lifecycle policies to move the files to S3 Glacier Instant Retrieval after 1 yea
- J. Query and retrieve the files by searching for metadata from Amazon S3.
- K. Store individual files in Amazon S3 Standard storag
- L. Use S3 Lifecycle policies to move the files to S3 Glacier Deep Archive after 1 yea
- 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 71

- (Exam 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 departmen
- 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 bucke
- 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-p> 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 72

- (Exam Topic 1)

A company is deploying a new public web application to AWS. The application will run behind an Application Load Balancer (ALB). The application needs to be encrypted at the edge with an SSL/TLS certificate that is issued by an external certificate authority (CA). The certificate must be rotated each year before the certificate expires.

What should a solutions architect do to meet these requirements?

- A. Use AWS Certificate Manager (ACM) to issue an SSL/TLS certificat
- B. Apply the certificate to the AL
- C. Use the managed renewal feature to automatically rotate the certificate.
- D. Use AWS Certificate Manager (ACM) to issue an SSL/TLS certificat
- E. Import the key material from the certificat
- F. Apply the certificate to the AL
- G. Use the managed renewal feature to automatically rotate the certificate.
- H. Use AWS Certificate Manager (ACM) Private Certificate Authority to issue an SSL/TLS certificate from the root C
- I. Apply the certificate to the AL
- J. Use the managed renewal feature to automatically rotate the certificate.
- K. Use AWS Certificate Manager (ACM) to import an SSL/TLS certificat
- L. Apply the certificate to the AL
- M. Use Amazon EventBridge (Amazon CloudWatch Events) to send a notification when the certificate is nearing expiratio
- N. Rotate the certificate manually.

Answer: D

NEW QUESTION 77

- (Exam 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 grou
- D. Use Amazon Elastic File System (Amazon EFS) for storage.
- E. Migrate the application to Amazon EC2 instances in a Multi-AZ Auto Scaling grou
- 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 82

- (Exam 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 syste
- 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 87

- (Exam Topic 2)

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

What should the solutions architect do to meet this requirement?

- A. Create an IAM role that has read access to the Parameter Store paramete
- B. Allow Decrypt access to an AWS Key Management Service (AWS KMS) key that is used to encrypt the paramete
- C. Assign this IAM role to the EC2 instance.
- D. Create an IAM policy that allows read access to the Parameter Store paramete
- E. Allow Decrypt access to an AWS Key Management Service (AWS KMS) key that is used to encrypt the paramete
- F. Assign this IAM policy to the EC2 instance.
- G. Create an IAM trust relationship between the Parameter Store parameter and the EC2 instanc
- H. Specify Amazon RDS as a principal in the trust policy.
- I. Create an IAM trust relationship between the DB instance and the EC2 instanc
- J. Specify Systems Manager as a principal in the trust policy.

Answer: B

Explanation:

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

NEW QUESTION 92

- (Exam Topic 2)

A company uses a three-tier web application to provide training to new employees. The application is accessed for only 12 hours every day. The company is using an Amazon RDS for MySQL DB instance to store information and wants to minimize costs.

What should a solutions architect do to meet these requirements?

- A. Configure an IAM policy for AWS Systems Manager Session Manager
- B. Create an IAM role for the policy
- C. Update the trust relationship of the role
- D. Set up automatic start and stop for the DB instance.
- E. Create an Amazon ElastiCache for Redis cache cluster that gives users the ability to access the data from the cache when the DB instance is stopped
- F. Invalidate the cache after the DB instance is started.
- G. Launch an Amazon EC2 instance
- H. Create an IAM role that grants access to Amazon RDS
- I. Attach the role to the EC2 instance
- J. Configure a cron job to start and stop the EC2 instance on the desired schedule.
- K. Create AWS Lambda functions to start and stop the DB instance
- L. Create Amazon EventBridge (Amazon CloudWatch Events) scheduled rules to invoke the Lambda function
- M. Configure the Lambda functions as event targets for the rules

Answer: C

NEW QUESTION 95

- (Exam 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 96

- (Exam Topic 2)

A company needs to move data from an Amazon EC2 instance to an Amazon S3 bucket. The company must ensure that no API calls and no data are routed through public internet routes. Only the EC2 instance can have access to upload data to the S3 bucket.

Which solution will meet these requirements?

- A. Create an interface VPC endpoint for Amazon S3 in the subnet where the EC2 instance is located. Attach a resource policy to the S3 bucket to only allow the EC2 instance's IAM role for access.
- B. Create a gateway VPC endpoint for Amazon S3 in the Availability Zone where the EC2 instance is located
- C. Attach appropriate security groups to the endpoint
- D. Attach a resource policy to the S3 bucket to only allow the EC2 instance's IAM role for access.
- E. Run the nslookup tool from inside the EC2 instance to obtain the private IP address of the S3 bucket's service API endpoint
- F. Create a route in the VPC route table to provide the EC2 instance with access to the S3 bucket
- G. Attach a resource policy to the S3 bucket to only allow the EC2 instance's IAM role for access.
- H. Use the AWS provided, publicly available ip-ranges.json file to obtain the private IP address of the S3 bucket's service API endpoint
- I. Create a route in the VPC route table to provide the EC2 instance with access to the S3 bucket
- J. Attach a resource policy to the S3 bucket to only allow the EC2 instance's IAM role for access.

Answer: A

Explanation:

(<https://aws.amazon.com/blogs/security/how-to-restrict-amazon-s3-bucket-access-to-a-specific-iam-role/>)

NEW QUESTION 101

- (Exam Topic 2)

A company is migrating its on-premises PostgreSQL database to Amazon Aurora PostgreSQL. The on-premises database must remain online and accessible during the migration. The Aurora database must remain synchronized with the on-premises database. Which combination of actions must a solutions architect take to meet these requirements? (Choose two.)

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

Answer: CD

NEW QUESTION 102

- (Exam Topic 2)

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

Which solution will meet these requirements?

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

Answer: D

NEW QUESTION 103

- (Exam Topic 2)

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

Which storage solution meets these requirements MOST cost-effectively?

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

Answer: D

Explanation:

Amazon S3 is cheapest and can be accessed from anywhere.

NEW QUESTION 106

- (Exam 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 109

- (Exam Topic 2)

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

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

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

Answer: A

Explanation:

https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_RestoreFromSnapshot.html#USER_RestoreUnderEncryptUnencryptedResources

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

NEW QUESTION 111

- (Exam Topic 2)

A company owns an asynchronous API that is used to ingest user requests and, based on the request type, dispatch requests to the appropriate microservice for processing. The company is using Amazon API Gateway to deploy the API front end, and an AWS Lambda function that invokes Amazon DynamoDB to store user requests before dispatching them to the processing microservices.

The company provisioned as much DynamoDB throughput as its budget allows, but the company is still experiencing availability issues and is losing user requests. What should a solutions architect do to address this issue without impacting existing users?

- A. Add throttling on the API Gateway with server-side throttling limits.
- B. Use DynamoDB Accelerator (DAX) and Lambda to buffer writes to DynamoDB.
- C. Create a secondary index in DynamoDB for the table with the user requests.
- D. Use the Amazon Simple Queue Service (Amazon SQS) queue and Lambda to buffer writes to DynamoDB.

Answer: D

Explanation:

By using an SQS queue and Lambda, the solutions architect can decouple the API front end from the processing microservices and improve the overall scalability and availability of the system. The SQS queue acts as a buffer, allowing the API front end to continue accepting user requests even if the processing microservices are experiencing high workloads or are temporarily unavailable. The Lambda function can then retrieve requests from the SQS queue and write them to DynamoDB, ensuring that all user requests are stored and processed. This approach allows the company to scale the processing microservices independently from the API front end, ensuring that the API remains available to users even during periods of high demand.

NEW QUESTION 112

- (Exam Topic 2)

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

Which solution meets these requirements?

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

Answer: B

Explanation:

Q: What does Amazon RDS manage on my behalf?

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

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

NEW QUESTION 116

- (Exam Topic 2)

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

Which solution will meet these requirements?

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

Answer: C

NEW QUESTION 117

- (Exam Topic 2)

A company runs its two-tier ecommerce website on AWS. The web tier consists of a load balancer that sends traffic to Amazon EC2 instances. The database tier uses an Amazon RDS DB instance. The EC2 instances and the RDS DB instance should not be exposed to the public internet. The EC2 instances require internet access to complete payment processing of orders through a third-party web service. The application must be highly available.

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

- A. Use an Auto Scaling group to launch the EC2 instances in private subnet
- B. Deploy an RDS Multi-AZ DB instance in private subnets.
- C. Configure a VPC with two private subnets and two NAT gateways across two Availability Zones. Deploy an Application Load Balancer in the private subnets.
- D. Use an Auto Scaling group to launch the EC2 instances in public subnets across two Availability Zones. Deploy an RDS Multi-AZ DB instance in private subnets.
- E. Configure a VPC with one public subnet, one private subnet, and two NAT gateways across two Availability Zone
- F. Deploy an Application Load Balancer in the public subnet.
- G. Configure a VPC with two public subnets, two private subnets, and two NAT gateways across two Availability Zone
- H. Deploy an Application Load Balancer in the public subnets.

Answer: AE

Explanation:

Before you begin: Decide which two Availability Zones you will use for your EC2 instances. Configure your virtual private cloud (VPC) with at least one public subnet in each of these Availability Zones. These public subnets are used to configure the load balancer. You can launch your EC2 instances in other subnets of these Availability Zones instead.

NEW QUESTION 119

- (Exam Topic 2)

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

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

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

Answer: C

Explanation:

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

NEW QUESTION 123

- (Exam Topic 2)

A solutions architect needs to implement a solution to reduce a company's storage costs. All the company's data is in the Amazon S3 Standard storage class. The company must keep all data for at least 25 years. Data from the most recent 2 years must be highly available and immediately retrievable.

Which solution will meet these requirements?

- A. Set up an S3 Lifecycle policy to transition objects to S3 Glacier Deep Archive immediately.
- B. Set up an S3 Lifecycle policy to transition objects to S3 Glacier Deep Archive after 2 years.
- C. Use S3 Intelligent-Tiering
- D. Activate the archiving option to ensure that data is archived in S3 Glacier Deep Archive.
- E. Set up an S3 Lifecycle policy to transition objects to S3 One Zone-Infrequent Access (S3 One Zone-IA) immediately and to S3 Glacier Deep Archive after 2 years.

Answer: B

NEW QUESTION 127

- (Exam Topic 2)

A media company is evaluating the possibility of moving its systems to the AWS Cloud. The company needs at least 10 TB of storage with the maximum possible I/O performance for video processing. 300 TB of very durable storage for storing media content, and 900 TB of storage to meet requirements for archival media that is not in use anymore.

Which set of services should a solutions architect recommend to meet these requirements?

- A. Amazon EBS for maximum performance, Amazon S3 for durable data storage, and Amazon S3 Glacier for archival storage
- B. Amazon EBS for maximum performance, Amazon EFS for durable data storage and Amazon S3 Glacier for archival storage
- C. Amazon EC2 instance store for maximum performance
- D. Amazon EFS for durable data storage and Amazon S3 for archival storage
- E. Amazon EC2 Instance store for maximum performance
- F. Amazon S3 for durable data storage, and Amazon S3 Glacier for archival storage

Answer: A

Explanation:

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

NEW QUESTION 130

- (Exam Topic 2)

A company's application is having performance issues. The application is stateful and needs to complete in-memory tasks on Amazon EC2 instances. The company used AWS CloudFormation to deploy infrastructure and used the M5 EC2 Instance family. As traffic increased, the application performance degraded. Users are reporting delays when they attempt to access the application.

Which solution will resolve these issues in the MOST operationally efficient way?

- A. Replace the EC2 instances with T3 EC2 instances that run in an Auto Scaling group
- B. Make the changes by using the AWS Management Console.
- C. Modify the CloudFormation templates to run the EC2 instances in an Auto Scaling group
- D. Increase the desired capacity and the maximum capacity of the Auto Scaling group manually when an increase is necessary
- E. Modify the CloudFormation template
- F. Replace the EC2 instances with R5 EC2 instances
- G. Use Amazon CloudWatch built-in EC2 memory metrics to track the application performance for future capacity planning.
- H. Modify the CloudFormation template
- I. Replace the EC2 instances with R5 EC2 instances
- J. Deploy the Amazon CloudWatch agent on the EC2 instances to generate custom application latency metrics for future capacity planning.

Answer: D

Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/cloudwatch-memory-metrics-ec2/>

NEW QUESTION 135

- (Exam Topic 2)

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

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

- A. Use AWS Control Tower to implement data residency guardrails to deny internet access and deny access to all AWS Regions except ap-northeast-3.
- B. Use rules in AWS WAF to prevent internet 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

NEW QUESTION 139

- (Exam Topic 2)

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

Which solution will meet these requirements MOST cost-effectively?

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

Answer: D

NEW QUESTION 140

- (Exam Topic 2)

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

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

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

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

Answer: C

NEW QUESTION 143

- (Exam Topic 2)

A company's website provides users with downloadable historical performance reports. The website needs a solution that will scale to meet the company's website demands globally. The solution should be

cost-effective, limit the provisioning of infrastructure resources, and provide the fastest possible response time.

Which combination should a solutions architect recommend to meet these requirements?

- A. Amazon CloudFront and Amazon S3
- B. AWS Lambda and Amazon DynamoDB
- C. Application Load Balancer with Amazon EC2 Auto Scaling
- D. Amazon Route 53 with internal Application Load Balancers

Answer: A

Explanation:

Cloudfront for rapid response and s3 to minimize infrastructure.

NEW QUESTION 145

- (Exam Topic 2)

A company has a dynamic web application hosted on two Amazon EC2 instances. The company has its own SSL certificate, which is on each instance to perform SSL termination.

There has been an increase in traffic recently, and the operations team determined that SSL encryption and decryption is causing the compute capacity of the web servers to reach their maximum limit.

What should a solutions architect do to increase the application's performance?

- A. Create a new SSL certificate using AWS Certificate Manager (ACM) install the ACM certificate on each instance
- B. Create an Amazon S3 bucket Migrate the SSL certificate to the S3 bucket Configure the EC2 instances to reference the bucket for SSL termination
- C. Create another EC2 instance as a proxy server Migrate the SSL certificate to the new instance and configure it to direct connections to the existing EC2 instances
- D. Import the SSL certificate into AWS Certificate Manager (ACM) Create an Application Load Balancer with an HTTPS listener that uses the SSL certificate from ACM

Answer: D

Explanation:

<https://aws.amazon.com/certificate-manager/>:

"With AWS Certificate Manager, you can quickly request a certificate, deploy it on ACM-integrated AWS resources, such as Elastic Load Balancers, Amazon CloudFront distributions, and APIs on API Gateway, and let AWS Certificate Manager handle certificate renewals. It also enables you to create private certificates for your internal resources and manage the certificate lifecycle centrally."

NEW QUESTION 147

- (Exam 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 150

- (Exam Topic 2)

A global company is using Amazon API Gateway to design REST APIs for its loyalty club users in the us-east-1 Region and the ap-southeast-2 Region. A solutions architect must design a solution to protect these API Gateway managed REST APIs across multiple accounts from SQL injection and cross-site scripting attacks.

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

- A. Set up AWS WAF in both Region
- B. Associate Regional web ACLs with an API stage.
- C. Set up AWS Firewall Manager in both Region
- D. Centrally configure AWS WAF rules.
- E. Set up AWS Shield in both Region
- F. Associate Regional web ACLs with an API stage.
- G. Set up AWS Shield in one of the Region
- H. Associate Regional web ACLs with an API stage.

Answer: A

Explanation:

Using AWS WAF has several benefits. Additional protection against web attacks using criteria that you specify. You can define criteria using characteristics of web requests such as the following: Presence of SQL code that is likely to be malicious (known as SQL injection). Presence of a script that is likely to be malicious (known as cross-site scripting). AWS Firewall Manager simplifies your administration and maintenance tasks across multiple accounts and resources for a variety of protections. <https://docs.aws.amazon.com/waf/latest/developerguide/what-is-aws-waf.html>

NEW QUESTION 154

- (Exam 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 156

- (Exam Topic 2)

A company runs an Oracle database on premises. As part of the company's migration to AWS, the company wants to upgrade the database to the most recent available version. The company also wants to set up disaster recovery (DR) for the database. The company needs to minimize the operational overhead for normal operations and DR setup. The company also needs to maintain access to the database's underlying operating system. Which solution will meet these requirements?

- A. Migrate the Oracle database to an Amazon EC2 instance
- B. Set up database replication to a different AWS Region.
- C. Migrate the Oracle database to Amazon RDS for Oracle
- D. Activate Cross-Region automated backups to replicate the snapshots to another AWS Region.
- E. Migrate the Oracle database to Amazon RDS Custom for Oracle
- F. Create a read replica for the database in another AWS Region.
- G. Migrate the Oracle database to Amazon RDS for Oracle
- H. Create a standby database in another Availability Zone.

Answer: C

Explanation:

<https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/rds-custom.html> and <https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/working-with-custom-oracle.html>

NEW QUESTION 158

- (Exam Topic 2)

A company runs a high performance computing (HPC) workload on AWS. The workload required low-latency network performance and high network throughput with tightly coupled node-to-node communication. The Amazon EC2 instances are properly sized for compute and storage capacity, and are launched using default options.

What should a solutions architect propose to improve the performance of the workload?

- A. Choose a cluster placement group while launching Amazon EC2 instances.
- B. Choose dedicated instance tenancy while launching Amazon EC2 instances.
- C. Choose an Elastic Inference accelerator while launching Amazon EC2 instances.
- D. Choose the required capacity reservation while launching Amazon EC2 instances.

Answer: A

Explanation:

<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-resource-ec2-placementgroup.html> "A cluster placement group is a logical grouping of instances within a single Availability Zone that benefit from low network latency, high network throughput"

NEW QUESTION 162

- (Exam 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 163

- (Exam Topic 2)

A new employee has joined a company as a deployment engineer. The deployment engineer will be using AWS CloudFormation templates to create multiple AWS resources. A solutions architect wants the deployment engineer to perform job activities while following the principle of least privilege.

Which steps should the solutions architect do in conjunction to reach this goal? (Select two.)

- A. Have the deployment engineer use AWS account root user credentials for performing AWS CloudFormation stack operations.
- B. Create a new IAM user for the deployment engineer and add the IAM user to a group that has the PowerUsers IAM policy attached.
- C. Create a new IAM user for the deployment engineer and add the IAM user to a group that has the Administrators/Access IAM policy attached.
- D. Create a new IAM User for the deployment engineer and add the IAM user to a group that has an IAM policy that allows AWS CloudFormation actions only.

E. Create an IAM role for the deployment engineer to explicitly define the permissions specific to the AWS CloudFormation stack and launch stacks using Dial IAM role.

Answer: DE

Explanation:

https://docs.aws.amazon.com/IAM/latest/UserGuide/id_roles.html https://docs.aws.amazon.com/IAM/latest/UserGuide/id_users.html

NEW QUESTION 165

- (Exam Topic 2)

A company hosts a two-tier application on Amazon EC2 instances and Amazon RDS. The application's demand varies based on the time of day. The load is minimal after work hours and on weekends. The EC2 instances run in an EC2 Auto Scaling group that is configured with a minimum of two instances and a maximum of five instances. The application must be available at all times, but the company is concerned about overall cost.

Which solution meets the availability requirement MOST cost-effectively?

- A. Use all EC2 Spot Instance
- B. Stop the RDS database when it is not in use.
- C. Purchase EC2 Instance Savings Plans to cover five EC2 instance
- D. Purchase an RDS Reserved DB Instance
- E. Purchase two EC2 Reserved Instances Use up to three additional EC2 Spot Instances as neede
- F. Stop the RDS database when it is not in use.
- G. Purchase EC2 Instance Savings Plans to cover two EC2 instance
- H. Use up to three additional EC2 On-Demand Instances as neede
- I. Purchase an RDS Reserved DB Instance.

Answer: D

NEW QUESTION 169

- (Exam Topic 2)

A company sells ringtones created from clips of popular songs. The files containing the ringtones are stored in Amazon S3 Standard and are at least 128 KB in size. The company has millions of files, but downloads are infrequent for ringtones older than 90 days. The company needs to save money on storage while keeping the most accessed files readily available for its users.

Which action should the company take to meet these requirements MOST cost-effectively?

- A. Configure S3 Standard-Infrequent Access (S3 Standard-IA) storage for the initial storage tier of the objects.
- B. Move the files to S3 Intelligent-Tiering and configure it to move objects to a less expensive storage tier after 90 days.
- C. Configure S3 inventory to manage objects and move them to S3 Standard-Infrequent Access (S3 Standard-1A) after 90 days.
- D. Implement an S3 Lifecycle policy that moves the objects from S3 Standard to S3 Standard-Infrequent Access (S3 Standard-1A) after 90 days.

Answer: D

NEW QUESTION 174

- (Exam 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 176

- (Exam Topic 2)

A company runs a stateless web application in production on a group of Amazon EC2 On-Demand Instances behind an Application Load Balancer. The application experiences heavy usage during an 8-hour period each business day. Application usage is moderate and steady overnight Application usage is low during weekends.

The company wants to minimize its EC2 costs without affecting the availability of the application. Which solution will meet these requirements?

- A. Use Spot Instances for the entire workload.
- B. Use Reserved instances for the baseline level of usage Use Spot Instances for any additional capacity that the application needs.
- C. Use On-Demand Instances for the baseline level of usag
- D. Use Spot Instances for any additional capacity that the application needs
- E. Use Dedicated Instances for the baseline level of usag
- F. Use On-Demand Instances for any additional capacity that the application needs

Answer: B

NEW QUESTION 177

- (Exam Topic 3)

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

memory usage of the job are constant and are known in advance.

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

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

Answer: C

NEW QUESTION 181

- (Exam Topic 3)

A company wants to deploy a new public web application on AWS. The application includes a web server tier that uses Amazon EC2 instances. The application also includes a database tier that uses an Amazon RDS for MySQL DB instance.

The application must be secure and accessible for global customers that have dynamic IP addresses. How should a solutions architect configure the security groups to meet these requirements?

- A. Configure the security group for the web servers to allow inbound traffic on port 443 from 0.0.0.0/0. Configure the security group for the DB instance to allow inbound traffic on port 3306 from the security group of the web servers.
- B. Configure the security group for the web servers to allow inbound traffic on port 443 from the IP addresses of the customers. Configure the security group for the DB instance to allow inbound traffic on port 3306 from the security group of the web servers.
- C. Configure the security group for the web servers to allow inbound traffic on port 443 from the IP addresses of the customers. Configure the security group for the DB instance to allow inbound traffic on port 3306 from the IP addresses of the customers.
- D. Configure the security group for the web servers to allow inbound traffic on port 443 from 0.0.0.0/0. Configure the security group for the DB instance to allow inbound traffic on port 3306 from 0.0.0.0/0.

Answer: A

NEW QUESTION 185

- (Exam Topic 3)

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

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

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

Answer: D

Explanation:

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

NEW QUESTION 186

- (Exam Topic 3)

A company deploys an application on five Amazon EC2 instances. An Application Load Balancer (ALB) distributes traffic to the instances by using a target group. The average CPU usage on each of the instances is below 10% most of the time. With occasional surges to 65%.

A solution architect needs to implement a solution to automate the scalability of the application. The solution must optimize the cost of the architecture and must ensure that the application has enough CPU resources when surges occur.

Which solution will meet these requirements?

- A. Create an Amazon CloudWatch alarm that enters the ALARM state when the CPUUtilization metric is less than 20%. Create an AWS Lambda function that the CloudWatch alarm invokes to terminate one of the EC2 instances in the ALB target group.
- B. Create an EC2 Auto Scaling
- C. Select the existing ALB as the load balancer and the existing target group as the target group
- D. Set a target tracking scaling policy that is based on the ASGAverageCPUUtilization metric
- E. Set the minimum instances to 2, the desired capacity to 3, the maximum instances to 6, and the target value to 50%. Add the EC2 instances to the Auto Scaling group.
- F. Create an EC2 Auto Scaling
- G. Select the existing ALB as the load balancer and the existing target group. Set the minimum instances to 2, the desired capacity to 3, and the maximum instances to 6. Add the EC2 instances to the Scaling group.
- H. Create two Amazon CloudWatch alarms
- I. Configure the first CloudWatch alarm to enter the ALARM state when the average CPUUtilization metric is below 20%. Configure the second CloudWatch alarm to enter the ALARM state when the average CPUUtilization metric is above 50%. Configure the alarms to publish to an Amazon Simple Notification Service (Amazon SNS) topic to send an email message
- J. After receiving the message, log in to decrease or increase the number of EC2 instances that are running

Answer: B

NEW QUESTION 189

- (Exam Topic 3)

A company has a Microsoft NET application that runs on an on-premises Windows Server. The application stores data by using an Oracle Database Standard Edition server. The company is planning a migration to AWS and wants to minimize development changes while moving the application. The AWS application environment should be highly available.

Which combination of actions should the company take to meet these requirements? (Select TWO.)

- A. Refactor the application as serverless with AWS Lambda functions running .NET Core
- B. Rehost the application in AWS Elastic Beanstalk with the .NET platform in a Multi-AZ deployment
- C. Replatform the application to run on Amazon EC2 with the Amazon Linux Amazon Machine Image (AMI)
- D. Use AWS Database Migration Service (AWS DMS) to migrate from the Oracle database to Amazon DynamoDB in a Multi-AZ deployment
- E. Use AWS Database Migration Service (AWS DMS) to migrate from the Oracle database to Oracle on Amazon RDS in a Multi-AZ deployment

Answer: BE

NEW QUESTION 190

- (Exam Topic 3)

A company wants to migrate its 1 PB on-premises image repository to AWS. The images will be used by a serverless web application. Images stored in the repository are rarely accessed, but they must be immediately available. Additionally, the images must be encrypted at rest and protected from accidental deletion. Which solution meets these requirements?

- A. Implement client-side encryption and store the images in an Amazon S3 Glacier vault. Set a vault lock to prevent accidental deletion.
- B. Store the images in an Amazon S3 bucket in the S3 Standard-Infrequent Access (S3 Standard-IA) storage class. Enable versioning, default encryption, and MFA Delete on the S3 bucket.
- C. Store the images in an Amazon FSx for Windows File Server file share. Configure the Amazon FSx file share to use an AWS Key Management Service (AWS KMS) customer master key (CMK) to encrypt the images in the file share. Use NTFS permission sets on the images to prevent accidental deletion.
- D. Store the images in an Amazon Elastic File System (Amazon EFS) file share in the Infrequent Access storage class. Configure the EFS file share to use an AWS Key Management Service (AWS KMS) customer master key (CMK) to encrypt the images in the file share.
- E. Use NFS permission sets on the images to prevent accidental deletion.

Answer: B

NEW QUESTION 195

- (Exam Topic 3)

A company is designing a cloud communications platform that is driven by APIs. The application is hosted on Amazon EC2 instances behind a Network Load Balancer (NLB). The company uses Amazon API Gateway to provide external users with access to the application through APIs. The company wants to protect the platform against web exploits like SQL injection and also wants to detect and mitigate large, sophisticated DDoS attacks. Which combination of solutions provides the MOST protection? (Select TWO.)

- A. Use AWS WAF to protect the NLB.
- B. Use AWS Shield Advanced with the NLB.
- C. Use AWS WAF to protect Amazon API Gateway.
- D. Use Amazon GuardDuty with AWS Shield Standard.
- E. Use AWS Shield Standard with Amazon API Gateway.

Answer: BC

Explanation:

AWS Shield Advanced provides expanded DDoS attack protection for your Amazon EC2 instances, Elastic Load Balancing load balancers, CloudFront distributions, Route 53 hosted zones, and AWS Global Accelerator standard accelerators.

AWS WAF is a web application firewall that lets you monitor the HTTP and HTTPS requests that are forwarded to your protected web application resources. You can protect the following resource types:

Amazon CloudFront distribution Amazon API Gateway REST API Application Load Balancer

AWS AppSync GraphQL API Amazon Cognito user pool

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

NEW QUESTION 200

- (Exam Topic 3)

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

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

Answer: B

NEW QUESTION 205

- (Exam Topic 3)

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

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

- A. Create a AWS Glue extract, transform, and load (ETL) job that runs on a schedule
- B. Configure the ETL job to process the .CSV files and store the processed data in Amazon Redshift.

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

Answer: C

Explanation:

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

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

NEW QUESTION 209

- (Exam Topic 3)

A company has a three-tier application for image sharing. The application uses an Amazon EC2 instance for the front-end layer, another EC2 instance for the application layer, and a third EC2 instance for a MySQL database. A solutions architect must design a scalable and highly available solution that requires the least amount of change to the application.

Which solution meets these requirements?

- A. Use Amazon S3 to host the front-end layer
- B. Use AWS Lambda functions for the application layer
- C. Move the database to an Amazon DynamoDB table
- D. Use Amazon S3 to store and serve users' images.
- E. Use load-balanced Multi-AZ AWS Elastic Beanstalk environments for the front-end layer and the application layer
- F. Move the database to an Amazon RDS DB instance with multiple read replicas to serve users' images.
- G. Use Amazon S3 to host the front-end layer
- H. Use a fleet of EC2 instances in an Auto Scaling group for the application layer
- I. Move the database to a memory optimized instance type to store and serve users' images.
- J. Use load-balanced Multi-AZ AWS Elastic Beanstalk environments for the front-end layer and the application layer
- K. Move the database to an Amazon RDS Multi-AZ DB instance
- L. Use Amazon S3 to store and serve users' images.

Answer: D

Explanation:

for "Highly available": Multi-AZ & for "least amount of changes to the application": Elastic Beanstalk automatically handles the deployment, from capacity provisioning, load balancing, auto-scaling to application health monitoring

NEW QUESTION 212

- (Exam Topic 3)

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

Which solution meets these requirements?

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

Answer: A

NEW QUESTION 216

- (Exam Topic 3)

A company is using Amazon CloudFront with this website. The company has enabled logging on the CloudFront distribution, and logs are saved in one of the company's Amazon S3 buckets. The company needs to perform advanced analyses on the logs and build visualizations.

What should a solutions architect do to meet these requirements?

- A. Use standard SQL queries in Amazon Athena to analyze the CloudFront logs in the S3 bucket. Visualize the results with AWS Glue.
- B. Use standard SQL queries in Amazon Athena to analyze the CloudFront logs in the S3 bucket. Visualize the results with Amazon QuickSight.
- C. Use standard SQL queries in Amazon DynamoDB to analyze the CloudFront logs in the S3 bucket. Visualize the results with AWS Glue.
- D. Use standard SQL queries in Amazon DynamoDB to analyze the CloudFront logs in the S3 bucket. Visualize the results with Amazon QuickSight.

Answer: D

NEW QUESTION 221

- (Exam Topic 3)

A company is building a new web-based customer relationship management application. The application will use several Amazon EC2 instances that are backed by Amazon Elastic Block Store (Amazon EBS) volumes behind an Application Load Balancer (ALB). The application will also use an Amazon Aurora database. All

data for the application must be encrypted at rest and in transit.
Which solution will meet these requirements?

- A. Use AWS Key Management Service (AWS KMS) certificates on the ALB to encrypt data in transi
- B. Use AWS Certificate Manager (ACM) to encrypt the EBS volumes and Aurora database storage at rest.
- C. Use the AWS root account to log in to the AWS Management Consol
- D. Upload the company's encryption certificate
- E. While in the root account, select the option to turn on encryption for all data at rest and in transit for the account.
- F. Use a AWS Key Management Service (AWS KMS) to encrypt the EBS volumes and Aurora database storage at res
- G. Attach an AWS Certificate Manager (ACM) certificate to the ALB to encrypt data in transit.
- H. Use BitLocker to encrypt all data at res
- I. Import the company's TLS certificate keys to AWS key Management Service (AWS KMS). Attach the KMS keys to the ALB to encrypt data in transit.

Answer: C

NEW QUESTION 223

- (Exam Topic 3)

An application running on an Amazon EC2 instance in VPC-A needs to access files in another EC2 instance in VPC-B. Both VPCs are in separate AWS accounts. The network administrator needs to design a solution to configure secure access to EC2 instance in VPC-B from VPC-A. The connectivity should not have a single point of failure or bandwidth concerns.
Which solution will meet these requirements?

- A. Set up a VPC peering connection between VPC-A and VPC-B.
- B. Set up VPC gateway endpoints for the EC2 instance running in VPC-B.
- C. Attach a virtual private gateway to VPC-B and set up routing from VPC-A.
- D. Create a private virtual interface (VIF) for the EC2 instance running in VPC-B and add appropriate routes from VPC-A.

Answer: A

Explanation:

AWS uses the existing infrastructure of a VPC to create a VPC peering connection; it is neither a gateway nor a VPN connection, and does not rely on a separate piece of physical hardware. There is no single point of failure for communication or a bandwidth bottleneck.
<https://docs.aws.amazon.com/vpc/latest/peering/what-is-vpc-peering.html>

NEW QUESTION 227

- (Exam Topic 3)

A company needs to provide its employee with secure access to confidential and sensitive files. The company wants to ensure that the files can be accessed only by authorized users. The files must be downloaded security to the employees devices.
The files are stored in an on-premises Windows files server. However, due to an increase in remote usage, the file server out of capacity.
Which solution will meet these requirement?

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

Answer: C

NEW QUESTION 232

- (Exam Topic 3)

A solutions architect is designing a new API using Amazon API Gateway that will receive requests from users. The volume of requests is highly variable; several hours can pass without receiving a single request. The data processing will take place asynchronously, but should be completed within a few seconds after a request is made.
Which compute service should the solutions architect have the API invoke to deliver the requirements at the lowest cost?

- A. An AWS Glue job
- B. An AWS Lambda function
- C. A containerized service hosted in Amazon Elastic Kubernetes Service (Amazon EKS)
- D. A containerized service hosted in Amazon ECS with Amazon EC2

Answer: B

Explanation:

API Gateway + Lambda is the perfect solution for modern applications with serverless architecture.

NEW QUESTION 237

- (Exam Topic 3)

A company is using AWS to design a web application that will process insurance quotes Users will request quotes from the application Quotes must be separated by quote type, must be responded to within 24 hours, and must not get lost The solution must maximize operational efficiency and must minimize maintenance.
Which solution meets these requirements?

- A. Create multiple Amazon Kinesis data streams based on the quote type Configure the web application to send messages to the proper data stream Configure each backend group of application servers to use the Kinesis Client Library (KCL) to pool messages from its own data stream
- B. Create an AWS Lambda function and an Amazon Simple Notification Service (Amazon SNS) topic for each quote type Subscribe the Lambda function to its associated SNS topic Configure the application to publish requests tot quotes to the appropriate SNS topic
- C. Create a single Amazon Simple Notification Service (Amazon SNS) topic Subscribe Amazon Simple Queue Service (Amazon SQS) queues to the SNS topic

Configure SNS message filtering to publish messages to the proper SQS queue based on the quote type Configure each backend application server to use its own SQS queue

D. Create multiple Amazon Kinesis Data Firehose delivery streams based on the quote type to deliver data streams to an Amazon Elasticsearch Service (Amazon ES) cluster Configure the application to send messages to the proper delivery stream Configure each backend group of application servers to search for the messages from Amazon ES and process them accordingly

Answer: C

NEW QUESTION 241

- (Exam Topic 3)

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

How should the company resolve this issue?

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

Answer: A

NEW QUESTION 243

- (Exam Topic 3)

An application that is hosted on Amazon EC2 instances needs to access an Amazon S3 bucket Traffic must not traverse the internet How should a solutions architect configure access to meet these requirements?

- A. Create a private hosted zone by using Amazon Route 53
- B. Set up a gateway VPC endpoint for Amazon S3 in the VPC
- C. Configure the EC2 instances to use a NAT gateway to access the S3 bucket
- D. Establish an AWS Site-to-Site VPN connection between the VPC and the S3 bucket

Answer: B

NEW QUESTION 244

- (Exam Topic 3)

An ecommerce company is running a multi-tier application on AWS. The front-end and backend tiers run on Amazon EC2, and the database runs on Amazon RDS for MySQL. The backend tier communicates with the RDS instance. There are frequent calls to return identical database from the database that are causing performance slowdowns.

Which action should be taken to improve the performance of the backend?

- A. Implement Amazon SNS to store the database calls.
- B. Implement Amazon ElastiCache to cache the large database.
- C. Implement an RDS for MySQL read replica to cache database calls.
- D. Implement Amazon Kinesis Data Firehose to stream the calls to the database.

Answer: B

NEW QUESTION 248

- (Exam Topic 3)

A company has deployed a database in Amazon RDS for MySQL. Due to increased transactions, the database support team is reporting slow reads against the DB instance and recommends adding a read replica.

Which combination of actions should a solutions architect take before implementing this change? (Choose two.)

- A. Enable binlog replication on the RDS primary node.
- B. Choose a failover priority for the source DB instance.
- C. Allow long-running transactions to complete on the source DB instance.
- D. Create a global table and specify the AWS Regions where the table will be available.
- E. Enable automatic backups on the source instance by setting the backup retention period to a value other than 0.

Answer: CE

Explanation:

"An active, long-running transaction can slow the process of creating the read replica. We recommend that you wait for long-running transactions to complete before creating a read replica. If you create multiple read replicas in parallel from the same source DB instance, Amazon RDS takes only one snapshot at the start of the first create action. When creating a read replica, there are a few things to consider. First, you must enable automatic backups on the source DB instance by setting the backup retention period to a value other than 0. This requirement also applies to a read replica that is the source DB instance for another read replica" https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_ReadRepl.html

NEW QUESTION 251

- (Exam Topic 3)

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

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

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

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

Answer: B

Explanation:

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

NEW QUESTION 253

- (Exam Topic 3)

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

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

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

Answer: AD

Explanation:

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

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

NEW QUESTION 255

- (Exam Topic 3)

A company is running a multi-tier e-commerce web application in the AWS Cloud. The application runs on Amazon EC2 instances with an Amazon RDS for MySQL Multi-AZ DB instance. Amazon RDS is configured with the latest generation DB instance with 2,000 GB of storage in a General Purpose SSD (gp3) Amazon Elastic Block Store (Amazon EBS) volume. The database performance affects the application during periods of high demand.

A database administrator analyzes the logs in Amazon CloudWatch Logs and discovers that the application performance always degrades when the number of read and write IOPS is higher than 20,000.

What should a solutions architect do to improve the application performance?

- A. Replace the volume with a magnetic volume.
- B. Increase the number of IOPS on the gp3 volume.
- C. Replace the volume with a Provisioned IOPS SSD (io2) volume.
- D. Replace the 2,000 GB gp3 volume with two 1,000 GB gp3 volumes.

Answer: C

NEW QUESTION 257

- (Exam Topic 3)

A media company collects and analyzes user activity data on premises. The company wants to migrate this capability to AWS. The user activity data store will continue to grow and will be petabytes in size. The company needs to build a highly available data ingestion solution that facilitates on-demand analytics of existing data and new data with SQL.

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

- A. Send activity data to an Amazon Kinesis data stream.
- B. Configure the stream to deliver the data to an Amazon S3 bucket.
- C. Send activity data to an Amazon Kinesis Data Firehose delivery stream.
- D. Configure the stream to deliver the data to an Amazon Redshift cluster.
- E. Place activity data in an Amazon S3 bucket.
- F. Configure Amazon S3 to run an AWS Lambda function on the data as the data arrives in the S3 bucket.
- G. Create an ingestion service on Amazon EC2 instances that are spread across multiple Availability Zones.
- H. Configure the service to forward data to an Amazon RDS Multi-AZ database.

Answer: B

Explanation:

Amazon Redshift is a fully managed, petabyte-scale data warehouse service in the cloud. You can start with just a few hundred gigabytes of data and scale to a petabyte or more. This allows you to use your data to gain new insights for your business and customers. The first step to create a data warehouse is to launch a set of nodes, called an Amazon Redshift cluster. After you provision your cluster, you can upload your data set and then perform data analysis queries. Regardless of the size of the data set, Amazon Redshift offers fast query performance using the same SQL-based tools and business intelligence applications that you use today.

NEW QUESTION 262

- (Exam Topic 3)

An application runs on Amazon EC2 instances in private subnets. The application needs to access an Amazon DynamoDB table. What is the MOST secure way to access the table while ensuring that the traffic does not leave the AWS network?

- A. Use a VPC endpoint for DynamoDB.
- B. Use a NAT gateway in a public subnet.
- C. Use a NAT instance in a private subnet.
- D. Use the internet gateway attached to the VPC.

Answer: A

Explanation:

<https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/vpc-endpoints-dynamodb.html>

A VPC endpoint for DynamoDB enables Amazon EC2 instances in your VPC to use their private IP addresses to access DynamoDB with no exposure to the public internet. Your EC2 instances do not require public IP addresses, and you don't need an internet gateway, a NAT device, or a virtual private gateway in your VPC. You use endpoint policies to control access to DynamoDB. Traffic between your VPC and the AWS service does not leave the Amazon network.

NEW QUESTION 267

- (Exam Topic 3)

A company runs an application on a group of Amazon Linux EC2 instances. For compliance reasons, the company must retain all application log files for 7 years. The log files will be analyzed by a reporting tool that must be able to access all the files concurrently.

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 EC2 instance store
- D. Amazon S3

Answer: D

NEW QUESTION 272

- (Exam Topic 3)

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

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

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

Answer: D

Explanation:

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

NEW QUESTION 275

- (Exam Topic 3)

A company needs a backup strategy for its three-tier stateless web application. The web application runs on Amazon EC2 instances in an Auto Scaling group with a dynamic scaling policy that is configured to respond to scaling events. The database tier runs on Amazon RDS for PostgreSQL. The web application does not require temporary local storage on the EC2 instances. The company's recovery point objective (RPO) is 2 hours.

The backup strategy must maximize scalability and optimize resource utilization for this environment. Which solution will meet these requirements?

- A. Take snapshots of Amazon Elastic Block Store (Amazon EBS) volumes of the EC2 instances and database every 2 hours to meet the RPO.
- B. Configure a snapshot lifecycle policy to take Amazon Elastic Block Store (Amazon EBS) snapshots. Enable automated backups in Amazon RDS to meet the RPO.
- C. Retain the latest Amazon Machine Images (AMIs) of the web and application tiers. Enable automated backups in Amazon RDS and use point-in-time recovery to meet the RPO.
- D. Take snapshots of Amazon Elastic Block Store (Amazon EBS) volumes of the EC2 instances every 2 hours. Enable automated backups in Amazon RDS and use point-in-time recovery to meet the RPO.

Answer: D

NEW QUESTION 280

- (Exam Topic 3)

A company has hundreds of Amazon EC2 Linux-based instances in the AWS Cloud. Systems administrators have used shared SSH keys to manage the instances. After a recent audit, the company's security team is mandating the removal of all shared keys. A solutions architect must design a solution that provides secure access to the EC2 instances.

Which solution will meet this requirement with the LEAST amount of administrative overhead?

- A. Use AWS Systems Manager Session Manager to connect to the EC2 instances.
- B. Use AWS Security Token Service (AWS STS) to generate one-time SSH keys on demand.
- C. Allow shared SSH access to a set of bastion instance
- D. Configure all other instances to allow only SSH access from the bastion instances
- E. Use an Amazon Cognito custom authorizer to authenticate user
- F. Invoke an AWS Lambda function to generate a temporary SSH key.

Answer: B

NEW QUESTION 281

- (Exam Topic 3)

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

Which storage solution is MOST cost-effective?

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

Answer: D

NEW QUESTION 282

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