

# Amazon

## Exam Questions AWS-Solution-Architect-Associate

Amazon AWS Certified Solutions Architect - Associate



### NEW QUESTION 1

- (Exam Topic 1)

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

Which design should the solutions architect use?

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

**Answer:** C

#### Explanation:

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

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

### NEW QUESTION 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 functions
- 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 functions

- J. Configure one function to receive the informatio
- K. Configure the other function to load the information into the databas
- 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 performs monthly maintenance on its AWS infrastructure. During these maintenance activities, the company needs to rotate the credentials for its Amazon ROS for MySQL databases across multiple AWS Regions  
Which solution will meet these requirements with the LEAST operational overhead?

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

**Answer:** A

**Explanation:**

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

**NEW QUESTION 5**

- (Exam Topic 1)

An application allows users at a company's headquarters to access product data. The product data is stored in an Amazon RDS MySQL DB instance. The operations team has isolated an application performance slowdown and wants to separate read traffic from write traffic. A solutions architect needs to optimize the application's performance quickly.  
What should the solutions architect recommend?

- A. Change the existing database to a Multi-AZ deployment
- B. Serve the read requests from the primary Availability Zone.
- C. Change the existing database to a Multi-AZ deployment
- D. Serve the read requests from the secondary Availability Zone.
- E. Create read replicas for the databases
- F. Configure the read replicas with half of the compute and storage resources as the source database.
- G. Create read replicas for the databases
- H. Configure the read replicas with the same compute and storage resources as the source database.

**Answer:** D

**Explanation:**

[https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER\\_MySQL.Replication.ReadReplicas.html](https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_MySQL.Replication.ReadReplicas.html)

**NEW QUESTION 6**

- (Exam Topic 1)

A company recently launched Linux-based application instances on Amazon EC2 in a private subnet and launched a Linux-based bastion host on an Amazon EC2 instance in a public subnet of a VPC A solutions architect needs to connect from the on-premises network, through the company's internet connection to the bastion host and to the application servers The solutions architect must make sure that the security groups of all the EC2 instances will allow that access  
Which combination of steps should the solutions architect take to meet these requirements? (Select TWO)

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

**Answer:** CD

**Explanation:**

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

**NEW QUESTION 7**

- (Exam Topic 1)

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

- A. Take EBS snapshots of the production EBS volume
- B. Restore the snapshots onto EC2 instance store volumes in the test environment.
- C. Configure the production EBS volumes to use the EBS Multi-Attach feature

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

**Answer: C**

#### NEW QUESTION 8

- (Exam Topic 1)

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

Which solution meets these requirements?

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

**Answer: B**

#### NEW QUESTION 9

- (Exam Topic 1)

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

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

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

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

**Answer: B**

#### NEW QUESTION 10

- (Exam Topic 1)

A development team needs to host a website that will be accessed by other teams. The website contents consist of HTML, CSS, client-side JavaScript, and images Which method is the MOST cost-effective for hosting the website?

- A. Containerize the website and host it in AWS Fargate.
- B. Create an Amazon S3 bucket and host the website there
- C. Deploy a web server on an Amazon EC2 instance to host the website.
- D. Configure an Application Load Balancer with an AWS Lambda target that uses the Express js framework.

**Answer: B**

#### Explanation:

In Static Websites, Web pages are returned by the server which are prebuilt. They use simple languages such as HTML, CSS, or JavaScript.

There is no processing of content on the server (according to the user) in Static Websites. Web pages are returned by the server with no change therefore, static Websites are fast.

There is no interaction with databases.

Also, they are less costly as the host does not need to support server-side processing with different languages.

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In Dynamic Websites, Web pages are returned by the server which are processed during runtime means they are not prebuilt web pages but they are built during runtime according to the user's demand.

These use server-side scripting languages such as PHP, Node.js, ASP.NET and many more supported by the server.

So, they are slower than static websites but updates and interaction with databases are possible.

#### NEW QUESTION 10

- (Exam Topic 1)

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

Which solution will meet these requirements?

- A. Share the dashboard from the CloudWatch console
- B. Enter the product manager's email address, and complete the sharing step

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

**Answer:** B

#### NEW QUESTION 14

- (Exam Topic 1)

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

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

**Answer:** B

#### Explanation:

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

#### NEW QUESTION 17

- (Exam Topic 1)

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

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

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

**Answer:** D

#### Explanation:

The visibility timeout begins when Amazon SQS returns a message. During this time, the consumer processes and deletes the message. However, if the consumer fails before deleting the message and your system doesn't call the DeleteMessage action for that message before the visibility timeout expires, the message becomes visible to other consumers and the message is received again. If a message must be received only once, your consumer should delete it within the duration of the visibility timeout. <https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqs-visibility-timeout.html>  
Keyword: SQS queue writes to an Amazon RDS table. From this, Option D is the best solution; other options are ruled out [Option A - You can't introduce one more queue in the existing one; Option B - only Permission; Option C - Only Retrieves Messages]. FIFO queues are designed to never introduce duplicate messages. However, your message producer might introduce duplicates in certain scenarios: for example, if the producer sends a message, does not receive a response, and then resends the same message. Amazon SQS APIs provide deduplication functionality that prevents your message producer from sending duplicates. Any duplicates introduced by the message producer are removed within a 5-minute deduplication interval. For standard queues, you might occasionally receive a duplicate copy of a message (at-least- once delivery). If you use a standard queue, you must design your applications to be idempotent (that is, they must not be affected adversely when processing the same message more than once).

#### NEW QUESTION 19

- (Exam Topic 1)

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

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

**Answer:** D

**Explanation:**

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

By routing incoming requests to Amazon SQS, the company can decouple the job requests from the processing instances. This allows them to scale the number of instances based on the size of the queue, providing more resources when needed. Additionally, using an Auto Scaling group based on the queue size will automatically scale the number of instances up or down depending on the workload. Updating the software to read from the queue will allow it to process the job requests in a more efficient manner, improving the performance of the system.

**NEW QUESTION 24**

- (Exam Topic 1)

A company hosts an application on AWS Lambda functions that are invoked by an Amazon API Gateway API. The Lambda functions save customer data to an Amazon Aurora MySQL database. Whenever the company upgrades the database, the Lambda functions fail to establish database connections until the upgrade is complete. The result is that customer data is not recorded for some of the event.

A solutions architect needs to design a solution that stores customer data that is created during database upgrades.

Which solution will meet these requirements?

- A. Provision an Amazon RDS proxy to sit between the Lambda functions and the database. Configure the Lambda functions to connect to the RDS proxy.
- B. Increase the run time of the Lambda functions to the maximum. Create a retry mechanism in the code that stores the customer data in the database.
- C. Persist the customer data to Lambda local storage.
- D. Configure new Lambda functions to scan the local storage to save the customer data to the database.
- E. Store the customer data in an Amazon Simple Queue Service (Amazon SQS) FIFO queue. Create a new Lambda function that polls the queue and stores the customer data in the database.

**Answer:** D

**Explanation:**

<https://www.learnaws.org/2020/12/13/aws-rds-proxy-deep-dive/>

RDS proxy can improve application availability in such a situation by waiting for the new database instance to be functional and maintaining any requests received from the application during this time. The end result is that the application is more resilient to issues with the underlying database.

This will enable solution to hold data till the time DB comes back to normal. RDS proxy is to optimally utilize the connection between Lambda and DB. Lambda can open multiple connections concurrently which can be taxing on DB compute resources, hence RDS proxy was introduced to manage and leverage these connections efficiently.

**NEW QUESTION 26**

- (Exam Topic 1)

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

Which solution will meet these requirements?

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

**Answer:** C

**NEW QUESTION 29**

- (Exam Topic 1)

A company needs the ability to analyze the log files of its proprietary application. The logs are stored in JSON format in an Amazon S3 bucket. Queries will be simple and will run on-demand. A solutions architect needs to perform the analysis with minimal changes to the existing architecture.

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

- A. Use Amazon Redshift to load all the content into one place and run the SQL queries as needed.
- B. Use Amazon CloudWatch Logs to store the logs. Run SQL queries as needed from the Amazon CloudWatch console.
- C. Use Amazon Athena directly with Amazon S3 to run the queries as needed.
- D. Use AWS Glue to catalog the logs. Use a transient Apache Spark cluster on Amazon EMR to run the SQL queries as needed.

**Answer:** C

**Explanation:**

Amazon Athena can be used to query JSON in S3.

**NEW QUESTION 33**

- (Exam Topic 1)

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

Which solution meets these requirements MOST cost-effectively?

- A. Stop the DB instance when tests are complete.
- B. Restart the DB instance when required.
- C. Use an Auto Scaling policy with the DB instance to automatically scale when tests are completed.
- D. Create a snapshot when tests are complete.

- E. Terminate the DB instance and restore the snapshot when required.
- F. Modify the DB instance to a low-capacity instance when tests are complete
- G. Modify the DB instance again when required.

**Answer:** A

#### NEW QUESTION 38

- (Exam Topic 1)

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

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

**Answer:** A

#### NEW QUESTION 43

- (Exam Topic 1)

A company needs to configure a real-time data ingestion architecture for its application. The company needs an API, a process that transforms data as the data is streamed, and a storage solution for the data.

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

- A. Deploy an Amazon EC2 instance to host an API that sends data to an Amazon Kinesis data stream. Create an Amazon Kinesis Data Firehose delivery stream that uses the Kinesis data stream as a data source
- B. Use AWS Lambda functions to transform the data
- C. Use the Kinesis Data Firehose delivery stream to send the data to Amazon S3.
- D. Deploy an Amazon EC2 instance to host an API that sends data to AWS Glue
- E. Stop source/destination checking on the EC2 instance
- F. Use AWS Glue to transform the data and to send the data to Amazon S3.
- G. Configure an Amazon API Gateway API to send data to an Amazon Kinesis data stream
- H. Create an Amazon Kinesis Data Firehose delivery stream that uses the Kinesis data stream as a data source
- I. Use AWS Lambda functions to transform the data
- J. Use the Kinesis Data Firehose delivery stream to send the data to Amazon S3.
- K. Configure an Amazon API Gateway API to send data to AWS Glue
- L. Use AWS Lambda functions to transform the data
- M. Use AWS Glue to send the data to Amazon S3.

**Answer:** C

#### NEW QUESTION 45

- (Exam Topic 1)

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

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

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

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

**Answer:** C

#### NEW QUESTION 46

- (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 49

- (Exam Topic 1)

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

What should the solutions architect do to enable Internet access for the private subnets?

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

**Answer:** A

**Explanation:**

<https://aws.amazon.com/about-aws/whats-new/2018/03/introducing-amazon-vpc-nat-gateway-in-the-aws-govclo>  
<https://docs.aws.amazon.com/vpc/latest/userguide/vpc-nat-comparison.html>

#### NEW QUESTION 53

- (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 dat
- 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 dat
- 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 PoslgreSQ
- L. Generate reports by using Amazon Athen
- M. Publish the reports to Amazon S3. Use S3 bucket policies to limit access to the reports.

**Answer:** A

#### NEW QUESTION 57

- (Exam Topic 1)

A company has more than 5 TB of file data on Windows file servers that run on premises Users and applications interact with the data each day

The company is moving its Windows workloads to AWS. As the company continues this process, the company requires access to AWS and on-premises file storage with minimum latency The company needs a solution that minimizes operational overhead and requires no significant changes to the existing file access patterns. The company uses an AWS Site-to-Site VPN connection for connectivity to AWS

What should a solutions architect do to meet these requirements?

- A. Deploy and configure Amazon FSx for Windows File Server on AW
- B. Move the on-premises file data to FSx for Windows File Serve
- C. Reconfigure the workloads to use FSx for Windows File Server on AWS.
- D. Deploy and configure an Amazon S3 File Gateway on premises Move the on-premises file data to the S3 File Gateway Reconfigure the on-premises workloads and the cloud workloads to use the S3 File Gateway
- E. Deploy and configure an Amazon S3 File Gateway on premises Move the on-premises file data to Amazon S3 Reconfigure the workloads to use either Amazon S3 directly or the S3 File Gateway, depending on each workload's location
- F. Deploy and configure Amazon FSx for Windows File Server on AWS Deploy and configure an Amazon FSx File Gateway on premises Move the on-premises file data to the FSx File Gateway Configure the cloud workloads to use FSx for Windows File Server on AWS Configure the on-premises workloads to use the FSx File Gateway

**Answer:** D

#### NEW QUESTION 60

- (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 fobs Configure EC2 Auto Scaling based on the load on the primary server
- F. implement the primary server and the compute nodes with Amazon EC2 instances that are managed in an Auto Scaling group Configure Amazon EventBridge (Amazon CloudWatch Events) as a destination for the jobs Configure EC2 Auto Scaling based on the load on the compute nodes

**Answer: B**

#### NEW QUESTION 63

- (Exam Topic 1)

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

What should a solutions architect do to meet this requirement?

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

**Answer: A**

#### Explanation:

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

#### NEW QUESTION 66

- (Exam Topic 1)

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

Which solution will meet these requirements?

- A. Create stage variables in API Gateway with Name="Endpoint-URL" and Value="Company Domain Name" to overwrite the default UR
- B. Import the public certificate associated with the company's domain name into AWS Certificate Manager (ACM).
- C. Create Route 53 DNS records with the company's domain nam
- D. Point the alias record to the Regional API Gateway stage endpoint
- E. Import the public certificate associated with the company's domain name into AWS Certificate Manager (ACM) in the us-east-1 Region.
- F. Create a Regional API Gateway endpoint
- G. Associate the API Gateway endpoint with the company's domain nam
- H. Import the public certificate associated with the company's domain name into AWS Certificate Manager (ACM) in the same Regio
- I. Attach the certificate to the API Gateway endpoint
- J. Configure Route 53 to route traffic to the API Gateway endpoint.
- K. Create a Regional API Gateway endpoint
- L. Associate the API Gateway endpoint with the company's domain nam
- M. Import the public certificate associated with the company's domain name into AWS Certificate Manager (ACM) in the us-east-1 Regio
- N. Attach the certificate to the API Gateway APIs.Create Route 53 DNS records with the company's domain nam
- O. Point an A record to the company's domain name.

**Answer: D**

#### NEW QUESTION 68

- (Exam Topic 1)

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

What should a solutions architect do to meet these requirements?

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

**Answer: C**

#### Explanation:

Static content can be cached at Cloud front Edge locations from S3 and dynamic content EC2 behind the ALB whose performance can be improved by Global Accelerator whose one endpoint is ALB and other Cloud front. So with regards to custom domain name endpoint is web application is R53 alias records for the custom domain point to web application

<https://aws.amazon.com/blogs/networking-and-content-delivery/improving-availability-and-performance-for-ap>

### NEW QUESTION 72

- (Exam Topic 1)

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

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

**Answer:** A

#### Explanation:

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

### NEW QUESTION 74

- (Exam Topic 1)

A company has a data ingestion workflow that consists of the following:

- > An Amazon Simple Notification Service (Amazon SNS) topic for notifications about new data deliveries
- > An AWS Lambda function to process the data and record metadata

The company observes that the ingestion workflow fails occasionally because of network connectivity issues. When such a failure occurs, the Lambda function does not ingest the corresponding data unless the company manually reruns the job.

Which combination of actions should a solutions architect take to ensure that the Lambda function ingests all data in the future? (Select TWO.)

- A. Configure the Lambda function in multiple Availability Zones.
- B. Create an Amazon Simple Queue Service (Amazon SQS) queue, and subscribe it to the SNS topic.
- C. Increase the CPU and memory that are allocated to the Lambda function.
- D. Increase the provisioned throughput for the Lambda function.
- E. Modify the Lambda function to read from an Amazon Simple Queue Service (Amazon SQS) queue

**Answer:** BE

### NEW QUESTION 77

- (Exam Topic 1)

An application runs on an Amazon EC2 instance in a VPC. The application processes logs that are stored in an Amazon S3 bucket. The EC2 instance needs to access the S3 bucket without connectivity to the internet.

Which solution will provide private network connectivity to Amazon S3?

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

**Answer:** A

#### Explanation:

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

### NEW QUESTION 80

- (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 system.
- E. The web server should be able to decrypt the files and access the database.

**Answer:** A

#### Explanation:

AWS Secrets Manager helps you protect secrets needed to access your applications, services, and IT resources. The service enables you to easily rotate,

manage, and retrieve database credentials, API keys, and other secrets throughout their lifecycle.

<https://docs.aws.amazon.com/secretsmanager/latest/userguide/intro.html>

Secrets Manager enables you to replace hardcoded credentials in your code, including passwords, with an API call to Secrets Manager to retrieve the secret programmatically. This helps ensure the secret can't be compromised by someone examining your code, because the secret no longer exists in the code. Also, you can configure Secrets Manager to automatically rotate the secret for you according to a specified schedule. This enables you to replace long-term secrets with short-term ones, significantly reducing the risk of compromise.

#### NEW QUESTION 81

- (Exam Topic 1)

A company hosts more than 300 global websites and applications. The company requires a platform to analyze more than 30 TB of clickstream data each day. What should a solutions architect do to transmit and process the clickstream data?

- A. Design an AWS Data Pipeline to archive the data to an Amazon S3 bucket and run an Amazon EMR cluster with the data to generate analytics
- B. Create an Auto Scaling group of Amazon EC2 instances to process the data and send it to an Amazon S3 data lake for Amazon Redshift to use for analysis
- C. Cache the data to Amazon CloudFront: Store the data in an Amazon S3 bucket. When an object is added to the S3 bucket, run an AWS Lambda function to process the data for analysis.
- D. Collect the data from Amazon Kinesis Data Stream
- E. Use Amazon Kinesis Data Firehose to transmit the data to an Amazon S3 data lake. Load the data in Amazon Redshift for analysis

**Answer: D**

#### Explanation:

<https://aws.amazon.com/es/blogs/big-data/real-time-analytics-with-amazon-redshift-streaming-ingestion/>

#### NEW QUESTION 82

- (Exam Topic 1)

A company runs an ecommerce application on Amazon EC2 instances behind an Application Load Balancer. The instances run in an Amazon EC2 Auto Scaling group across multiple Availability Zones. The Auto Scaling group scales based on CPU utilization metrics. The ecommerce application stores the transaction data in a MySQL 8.0 database that is hosted on a large EC2 instance.

The database's performance degrades quickly as application load increases. The application handles more read requests than write transactions. The company wants a solution that will automatically scale the database to meet the demand of unpredictable read workloads while maintaining high availability. Which solution will meet these requirements?

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

**Answer: C**

#### Explanation:

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

#### NEW QUESTION 85

- (Exam Topic 2)

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

What should the solutions architect do to meet this requirement?

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

**Answer: B**

#### Explanation:

[https://docs.aws.amazon.com/IAM/latest/UserGuide/reference\\_aws-services-that-work-with-iam.html](https://docs.aws.amazon.com/IAM/latest/UserGuide/reference_aws-services-that-work-with-iam.html)

#### NEW QUESTION 90

- (Exam Topic 2)

An online retail company has more than 50 million active customers and receives more than 25,000 orders each day. The company collects purchase data for customers and stores this data in Amazon S3. Additional customer data is stored in Amazon RDS.

The company wants to make all the data available to various teams so that the teams can perform analytics.

The solution must provide the ability to manage fine-grained permissions for the data and must minimize operational overhead.

Which solution will meet these requirements?

- A. Migrate the purchase data to write directly to Amazon RDS
- B. Use RDS access controls to limit access.
- C. Schedule an AWS Lambda function to periodically copy data from Amazon RDS to Amazon S3. Create an AWS Glue crawler
- D. Use Amazon Athena to query the data

- E. Use S3 policies to limit access.
- F. Create a data lake by using AWS Lake Formation
- G. Create an AWS Glue JDBC connection to Amazon RDS
- H. Register the S3 bucket in Lake Formation
- I. Use Lake Formation access controls to limit access.
- J. Create an Amazon Redshift cluster
- K. Schedule an AWS Lambda function to periodically copy data from Amazon S3 and Amazon RDS to Amazon Redshift
- L. Use Amazon Redshift access controls to limit access.

**Answer: D**

#### NEW QUESTION 93

- (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 98

- (Exam Topic 2)

A company wants to use the AWS Cloud to make an existing application highly available and resilient. The current version of the application resides in the company's data center. The application recently experienced data loss after a database server crashed because of an unexpected power outage. The company needs a solution that avoids any single points of failure. The solution must give the application the ability to scale to meet user demand. Which solution will meet these requirements?

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

**Answer: A**

#### NEW QUESTION 101

- (Exam Topic 2)

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

Which solution will meet these requirements?

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

**Answer: B**

#### NEW QUESTION 103

- (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 105

- (Exam Topic 2)

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

How should the solutions architect comply with these requirements?

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

**Answer:** D

**Explanation:**

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

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

#### NEW QUESTION 110

- (Exam Topic 2)

A solutions architect is designing a customer-facing application for a company. The application's database will have a clearly defined access pattern throughout the year and will have a variable number of reads and writes that depend on the time of year. The company must retain audit records for the database for 7 days. The recovery point objective (RPO) must be less than 5 hours.

Which solution meets these requirements?

- A. Use Amazon DynamoDB with auto scaling. Use on-demand backups and Amazon DynamoDB Streams.
- B. Use Amazon Redshift.
- C. Configure concurrency scaling.
- D. Activate audit logging.
- E. Perform database snapshots every 4 hours.
- F. Use Amazon RDS with Provisioned IOPS. Activate the database auditing parameter. Perform database snapshots every 5 hours.
- G. Use Amazon Aurora MySQL with auto scaling.
- H. Activate the database auditing parameter.

**Answer:** B

#### NEW QUESTION 113

- (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 114

- (Exam Topic 2)

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

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

- A. Move the data to the S3 bucket.
- B. Use server-side encryption with Amazon S3 managed encryption keys (SSE-S3). Use the built-in key rotation behavior of SSE-S3 encryption keys.
- C. Create an AWS Key Management Service (AWS KMS) customer managed key.
- D. Enable automatic key rotation.
- E. Set the S3 bucket's default encryption behavior to use the customer managed KMS key.
- F. Move the data to the S3 bucket.
- G. Create an AWS Key Management Service (AWS KMS) customer managed key.
- H. Set the S3 bucket's default encryption behavior to use the customer managed KMS key.

- I. Move the data to the S3 bucket
- J. Manually rotate the KMS key every year.
- K. Encrypt the data with customer key material before moving the data to the S3 bucket
- L. Create an AWS Key Management Service (AWS KMS) key without key material
- M. Import the customer key material into the KMS key
- N. Enable automatic key rotation.

**Answer: C**

#### NEW QUESTION 119

- (Exam Topic 2)

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

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

**Answer: A**

#### Explanation:

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

#### NEW QUESTION 121

- (Exam Topic 2)

A company is developing a file-sharing application that will use an Amazon S3 bucket for storage. The company wants to serve all the files through an Amazon CloudFront distribution. The company does not want the files to be accessible through direct navigation to the S3 URL. What should a solutions architect do to meet these requirements?

- A. Write individual policies for each S3 bucket to grant read permission for only CloudFront access.
- B. Create an IAM user
- C. Grant the user read permission to objects in the S3 bucket
- D. Assign the user to CloudFront.
- E. Write an S3 bucket policy that assigns the CloudFront distribution ID as the Principal and assigns the target S3 bucket as the Amazon Resource Name (ARN).
- F. Create an origin access identity (OAI). Assign the OAI to the CloudFront distribution
- G. Configure the S3 bucket permissions so that only the OAI has read permission.

**Answer: D**

#### Explanation:

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

#### NEW QUESTION 122

- (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 127

- (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 129

- (Exam Topic 2)

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

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

**Answer:** D

#### NEW QUESTION 131

- (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 134

- (Exam Topic 2)

A company has implemented a self-managed DNS solution on three Amazon EC2 instances behind a Network Load Balancer (NLB) in the us-west-2 Region. Most of the company's users are located in the United States and Europe. The company wants to improve the performance and availability of the solution. The company launches and configures three EC2 instances in the eu-west-1 Region and adds the EC2 instances as targets for a new NLB. Which solution can the company use to route traffic to all the EC2 instances?

- A. Create an Amazon Route 53 geolocation routing policy to route requests to one of the two NLB
- B. Create an Amazon CloudFront distribution
- C. Use the Route 53 record as the distribution's origin.
- D. Create a standard accelerator in AWS Global Accelerator
- E. Create endpoint groups in us-west-2 and eu-west-1. Add the two NLBs as endpoints for the endpoint groups.
- F. Attach Elastic IP addresses to the six EC2 instances
- G. Create an Amazon Route 53 geolocation routing policy to route requests to one of the six EC2 instances
- H. Create an Amazon CloudFront distribution
- I. Use the Route 53 record as the distribution's origin.
- J. Replace the two NLBs with two Application Load Balancers (ALBs). Create an Amazon Route 53 latency routing policy to route requests to one of the two ALB
- K. Create an Amazon CloudFront distribution
- L. Use the Route 53 record as the distribution's origin.

**Answer:** B

#### Explanation:

For standard accelerators, Global Accelerator uses the AWS global network to route traffic to the optimal regional endpoint based on health, client location, and policies that you configure, which increases the availability of your applications. Endpoints for standard accelerators can be Network Load Balancers, Application Load Balancers, Amazon EC2 instances, or Elastic IP addresses that are located in one AWS Region or multiple Regions.  
<https://docs.aws.amazon.com/global-accelerator/latest/dg/what-is-global-accelerator.html>

#### NEW QUESTION 139

- (Exam Topic 2)

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

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

**Answer: D**

#### Explanation:

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

#### NEW QUESTION 141

- (Exam Topic 2)

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

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

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

**Answer: A**

#### Explanation:

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

#### NEW QUESTION 144

- (Exam Topic 2)

A company wants to measure the effectiveness of its recent marketing campaigns. The company performs batch processing on csv files of sales data and stores the results in an Amazon S3 bucket once every hour. The S3 bucket contains billions of objects. The company runs one-time queries in Amazon Athena to determine which products are most popular on a particular date for a particular region. Queries sometimes fail or take longer than expected to finish.

Which actions should a solutions architect take to improve the query performance and reliability? (Select TWO.)

- A. Reduce the S3 object sizes to less than 126 MB.
- B. Partition the data by date and region in Amazon S3.
- C. Store the files as large, single objects in Amazon S3.
- D. Use Amazon Kinesis Data Analytics to run the queries as part of the batch processing operation.
- E. Use an AWS Glue extract, transform, and load (ETL) process to convert the csv files into Apache Parquet format.

**Answer: CE**

#### NEW QUESTION 147

- (Exam Topic 2)

A gaming company is designing a highly available architecture. The application runs on a modified Linux kernel and supports only UDP-based traffic. The company needs the front-end tier to provide the best possible user experience. That tier must have low latency, route traffic to the nearest edge location, and provide static IP addresses for entry into the application endpoints.

What should a solutions architect do to meet these requirements?

- A. Configure Amazon Route 53 to forward requests to an Application Load Balance.
- B. Use AWS Lambda for the application in AWS Application Auto Scaling.
- C. Configure Amazon CloudFront to forward requests to a Network Load Balance.
- D. Use AWS Lambda for the application in an AWS Application Auto Scaling group.
- E. Configure AWS Global Accelerator to forward requests to a Network Load Balance.
- F. Use Amazon EC2 instances for the application in an EC2 Auto Scaling group.
- G. Configure Amazon API Gateway to forward requests to an Application Load Balance.
- H. Use Amazon EC2 instances for the application in an EC2 Auto Scaling group.

**Answer: C**

#### NEW QUESTION 152

- (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 databas
- E. Send a message that includes the order number to Amazon Simple Notification Service (Amazon SNS). Set the payment service to poll Amazon SN
- F. retrieve the message, and process the order.
- G. Store the order in the databas
- H. Send a message that includes the order number to an Amazon Simple Queue Service (Amazon SQS) FIFO queu
- I. Set the payment service to retrieve the message and process the orde
- 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 153**

- (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 155**

- (Exam Topic 3)

A company uses a payment processing system that requires messages for a particular payment ID to be received in the same order that they were sent Otherwise, the payments might be processed incorrectly.

Which actions should a solutions architect take to meet this requirement? (Select TWO.)

- A. Write the messages to an Amazon DynamoDB table with the payment ID as the partition key
- B. Write the messages to an Amazon Kinesis data stream with the payment ID as the partition key.
- C. Write the messages to an Amazon ElastiCache for Memcached cluster with the payment ID as the key
- D. Write the messages to an Amazon Simple Queue Service (Amazon SQS) queue Set the message attribute to use the payment ID
- E. Write the messages to an Amazon Simple Queue Service (Amazon SQS) FIFO queue
- F. Set the message group to use the payment ID.

**Answer: AE**

**NEW QUESTION 158**

- (Exam Topic 3)

A company s order system sends requests from clients to Amazon EC2 instances The EC2 instances process the orders and men store the orders in a database on Amazon RDS Users report that they must reprocess orders when the system fails. The company wants a resilient solution that can process orders automatically it a system outage occurs.

What should a solutions architect do to meet these requirements?

- A. Move (he EC2 Instances into an Auto Scaling group Create an Amazon EventBridge (Amazon CloudWatch Events) rule to target an Amazon Elastic Container Service (Amazon ECS) task
- B. Move the EC2 instances into an Auto Scaling group behind an Application Load Balancer (ALB) Update the order system to send messages to the ALB endpoint.
- C. Move the EC2 instances into an Auto Scaling group Configure the order system to send messages to an Amazon Simple Queue Service (Amazon SQS) queue Configure the EC2 instances to consume messages from the queue
- D. Create an Amazon Simple Notification Service (Amazon SNS) topic Create an AWS Lambda function, and subscribe the function to the SNS topic Configure the order system to send messages to the SNS topic Send a command to the EC2 instances to process the messages by using AWS Systems Manager Run Command

**Answer: C**

**NEW QUESTION 162**

- (Exam Topic 3)

An ecommerce company has noticed performance degradation of its Amazon RDS based web application. The performance degradation is attributed to an increase in the number of read-only SQL queries triggered by business analysts. A solutions architect needs to solve the problem with minimal changes to the existing web application.

What should the solutions architect recommend?

- A. Export the data to Amazon DynamoDB and have the business analysts run their queries.
- B. Load the data into Amazon ElastiCache and have the business analysts run their queries.
- C. Create a read replica of the primary database and have the business analysts run their queries.
- D. Copy the data into an Amazon Redshift cluster and have the business analysts run their queries

**Answer:** C

**Explanation:**

Creating a read replica of the primary RDS database will offload the read-only SQL queries from the primary database, which will help to improve the performance of the web application. Read replicas are exact copies of the primary database that can be used to handle read-only traffic, which will reduce the load on the primary database and improve the performance of the web application. This solution can be implemented with minimal changes to the existing web application, as the business analysts can continue to run their queries on the read replica without modifying the code.

**NEW QUESTION 163**

- (Exam Topic 3)

A company has deployed a Java Spring Boot application as a pod that runs on Amazon Elastic Kubernetes Service (Amazon EKS) in private subnets. The application needs to write data to an Amazon DynamoDB table. A solutions architect must ensure that the application can interact with the DynamoDB table without exposing traffic to the internet.

Which combination of steps should the solutions architect take to accomplish this goal? (Choose two.)

- A. Attach an IAM role that has sufficient privileges to the EKS pod.
- B. Attach an IAM user that has sufficient privileges to the EKS pod.
- C. Allow outbound connectivity to the DynamoDB table through the private subnets' network ACLs.
- D. Create a VPC endpoint for DynamoDB.
- E. Embed the access keys in the Java Spring Boot code.

**Answer:** AD

**Explanation:**

<https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/vpc-endpoints-dynamodb.html> <https://aws.amazon.com/about-aws/whats-new/2019/09/amazon-eks-adds-support-to-assign-iam-permissions-to->

**NEW QUESTION 165**

- (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 166**

- (Exam Topic 3)

A company has an On-premises volume backup solution that has reached its end of life. The company wants to use AWS as part of a new backup solution and wants to maintain local access to all the data while it is backed up on AWS. The company wants to ensure that the data backed up on AWS is automatically and securely transferred.

Which solution meets these requirements?

- A. Use AWS Snowball to migrate data out of the on-premises solution to Amazon S3. Configure on-premises systems to mount the Snowball S3 endpoint to provide local access to the data.
- B. Use AWS Snowball Edge to migrate data out of the on-premises solution to Amazon S3. Use the Snowball Edge file interface to provide on-premises systems with local access to the data.
- C. Use AWS Storage Gateway and configure a cached volume gateway
- D. Run the Storage Gateway software application on premises and configure a percentage of data to cache locally
- E. Mount the gateway storage volumes to provide local access to the data.
- F. Use AWS Storage Gateway and configure a stored volume gateway
- G. Run the Storage software application on premises and map the gateway storage volumes to on-premises storage
- H. Mount the gateway storage volumes to provide local access to the data.

**Answer:** C

**NEW QUESTION 170**

- (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 174**

- (Exam Topic 3)

A company has an API that receives real-time data from a fleet of monitoring devices. The API stores this data in an Amazon RDS DB instance for later analysis. The amount of data that the monitoring devices send to the API fluctuates. During periods of heavy traffic, the API often returns timeout errors. After an inspection of the logs, the company determines that the database is not capable of processing the volume of write traffic that comes from the API. A solutions architect must minimize the number of connections to the database and must ensure that data is not lost during periods of heavy traffic. Which solution will meet these requirements?

- A. Increase the size of the DB instance to an instance type that has more available memory.
- B. Modify the DB instance to be a Multi-AZ DB instance.
- C. Configure the application to write to all active RDS DB instances.
- D. Modify the API to write incoming data to an Amazon Simple Queue Service (Amazon SQS) queue.
- E. Use an AWS Lambda function that Amazon SQS invokes to write data from the queue to the database.
- F. Modify the API to write incoming data to an Amazon Simple Notification Service (Amazon SNS) topic. Use an AWS Lambda function that Amazon SNS invokes to write data from the topic to the database.

**Answer: C**

**Explanation:**

Using Amazon SQS will help minimize the number of connections to the database, as the API will write data to a queue instead of directly to the database. Additionally, using an AWS Lambda function that Amazon SQS invokes to write data from the queue to the database will help ensure that data is not lost during periods of heavy traffic, as the queue will serve as a buffer between the API and the database.

**NEW QUESTION 176**

- (Exam Topic 3)

A solutions architect has created two IAM policies: Policy1 and Policy2. Both policies are attached to an IAM group.

**Policy 1**

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "iam:Get*",
        "iam:List*",
        "kms:List*",
        "ec2:*",
        "ds:*",
        "logs:Get*",
        "logs:Describe*"
      ],
      "Resource": "*"
    }
  ]
}
```

## Policy 2

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Deny",
      "Action": "ds:Delete*",
      "Resource": "*"
    }
  ]
}
```

A cloud engineer is added as an IAM user to the IAM group. Which action will the cloud engineer be able to perform?

- A. Deleting IAM users
- B. Deleting directories
- C. Deleting Amazon EC2 instances
- D. Deleting logs from Amazon CloudWatch Logs

**Answer: C**

### Explanation:

<https://awscli.amazonaws.com/v2/documentation/api/latest/reference/ds/index.html>

## NEW QUESTION 181

- (Exam Topic 3)

A company wants to migrate an Oracle database to AWS. The database consists of a single table that contains millions of geographic information systems (GIS) images that are high resolution and are identified by a geographic code.

When a natural disaster occurs tens of thousands of images get updated every few minutes. Each geographic code has a single image or row that is associated with it. The company wants a solution that is highly available and scalable during such events

Which solution meets these requirements MOST cost-effectively?

- A. Store the images and geographic codes in a database table Use Oracle running on an Amazon RDS Multi-AZ DB instance
- B. Store the images in Amazon S3 buckets Use Amazon DynamoDB with the geographic code as the key and the image S3 URL as the value
- C. Store the images and geographic codes in an Amazon DynamoDB table Configure DynamoDB Accelerator (DAX) during times of high load
- D. Store the images in Amazon S3 buckets Store geographic codes and image S3 URLs in a database table Use Oracle running on an Amazon RDS Multi-AZ DB instance.

**Answer: A**

## NEW QUESTION 185

- (Exam Topic 3)

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

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

Which solution will meet these requirements?

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

**Answer: C**

## NEW QUESTION 190

- (Exam Topic 3)

A data analytics company wants to migrate its batch processing system to AWS. The company receives thousands of small data files periodically during the day through FTP. A on-premises batch job processes the data files overnight. However, the batch job takes hours to finish running.

The company wants the AWS solution to process incoming data files as possible with minimal changes to the FTP clients that send the files. The solution must delete the incoming data files after the files have been processed successfully. Processing for each file needs to take 3-8 minutes.

Which solution will meet these requirements in the MOST operationally efficient way?

- A. Use an Amazon EC2 instance that runs an FTP server to store incoming files as objects in Amazon S3 Glacier Flexible Retrieval
- B. Configure a job queue in AWS Batch
- C. Use Amazon EventBridge rules to invoke the job to process the objects nightly from S3 Glacier Flexible Retrieval
- D. Delete the objects after the job has processed the objects.
- E. Use an Amazon EC2 instance that runs an FTP server to store incoming files on an Amazon Elastic Block Store (Amazon EBS) volume
- F. Configure a job queue in AWS Batch
- G. Use Amazon EventBridge rules to invoke the process the files nightly from the EBS volume
- H. Delete the files after the job has processed the files.
- I. Use AWS Transfer Family to create an FTP server to store incoming files on an Amazon Elastic Block Store (Amazon EBS) volume
- J. Configure a job queue in AWS Batch

- K. Use an Amazon S3 event notification when each files arrives to invoke the job in AWS Batc
- L. Delete the files after the job has processed the files.
- M. Use AWS Transfer Family to create an FTP server to store incoming files in Amazon S3 Standard.Create an AWS Lambda function to process the files and to delete the files after they are proessed.yse an S3 event notification to invoke the lambda function when the fils arrive

**Answer: C**

#### NEW QUESTION 195

- (Exam Topic 3)

A company wants to configure its Amazon CloudFront distribution to use SSL/TLS certificates. The company does not want to use the default domain name for the distribution. Instead, the company wants to use a different domain name for the distribution.

Which solution will deploy the certificate with icurring any additional costs?

- A. Request an Amazon issued private certificate from AWS Certificate Manager (ACM) in the us-east-1 Region
- B. Request an Amazon issued private certificate from AWS Certificate Manager (ACM) in the us-west-1 Region.
- C. Request an Amazon issued public certificate from AWS Certificate Manager (ACU) in the us-east-1 Region
- D. Request an Amazon issued public certificate from AWS Certificate Manager (ACU) in the us-west-1 Regon.

**Answer: B**

#### NEW QUESTION 200

- (Exam Topic 3)

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

Which solution meets these requirements?

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

**Answer: D**

#### Explanation:

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

#### NEW QUESTION 201

- (Exam Topic 3)

A solutions architect is designing the architecture for a software demonstration environment The environment will run on Amazon EC2 instances in an Auto Scaling group behind an Application Load Balancer (ALB) The system will experience significant increases in traffic during working hours but Is not required to operate on weekends.

Which combination of actions should the solutions architect take to ensure that the system can scale to meet demand? (Select TWO)

- A. Use AWS Auto Scaling to adjust the ALB capacity based on request rate
- B. Use AWS Auto Scaling to scale the capacity of the VPC internet gateway
- C. Launch the EC2 instances in multiple AWS Regions to distribute the load across Regions
- D. Use a target tracking scaling policy to scale the Auto Scaling group based on instance CPU utilization
- E. Use scheduled scaling to change the Auto Scaling group minimum, maximum, and desired capacity to zero for weekends Revert to the default values at the start of the week

**Answer: DE**

#### NEW QUESTION 203

- (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 teem reports that the application is vulnerable to SOL 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 SOL injection attempts automatically

**Answer: A**

#### NEW QUESTION 205

- (Exam Topic 3)

A gaming company is moving its public scoreboard from a data center to the AWS Cloud. The company uses Amazon EC2 Windows Server instances behind an Application Load Balancer to host its dynamic application. The company needs a highly available storage solution for the application. The application consists of static files and dynamic server-side code.

Which combination of steps should a solutions architect take to meet these requirements? (Select TWO.) ' A. Store the static files on Amazon S3. Use Amazon A. CloudFront to cache objects at the edge.

- A. Store the static files on Amazon S3. Use Amazon ElastiCache to cache objects at the edge.
- B. Store the server-side code on Amazon Elastic File System (Amazon EFS). Mount the EFS volume on each EC2 instance to share the files.
- C. Store the server-side code on Amazon FSx for Windows File Serve

- D. Mount the FSx for Windows File Server volume on each EC2 instance to share the files.
- E. Store the server-side code on a General Purpose SSD (gp2) Amazon Elastic Block Store (Amazon EBS) volume.
- F. Mount the EBS volume on each EC2 instance to share the files.

**Answer:** AE

#### NEW QUESTION 209

- (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](https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_ReadRepl.html)

#### NEW QUESTION 212

- (Exam Topic 3)

A company uses a 100 GB Amazon RDS for Microsoft SQL Server Single-AZ DB instance in the us-east-1 Region to store customer transactions. The company needs high availability and automate recovery for the DB instance.

The company must also run reports on the RDS database several times a year. The report process causes transactions to take longer than usual to post to the customer's accounts.

Which combination of steps will meet these requirements? (Select TWO.)

- A. Modify the DB instance from a Single-AZ DB instance to a Multi-AZ deployment.
- B. Take a snapshot of the current DB instance.
- C. Restore the snapshot to a new RDS deployment in another Availability Zone.
- D. Create a read replica of the DB instance in a different Availability Zone.
- E. Point all requests for reports to the read replica.
- F. Migrate the database to RDS Custom.
- G. Use RDS Proxy to limit reporting requests to the maintenance window.

**Answer:** BD

#### NEW QUESTION 215

- (Exam Topic 3)

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

Which service should a solutions architect recommend?

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

**Answer:** B

#### NEW QUESTION 216

- (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 219

- (Exam Topic 3)

A solutions architect observes that a nightly batch processing job is automatically scaled up for 1 hour before the desired Amazon EC2 capacity is reached. The

peak capacity is the 'same every night and the batch jobs always start at 1 AM. The solutions architect needs to find a cost-effective solution that will allow for the desired EC2 capacity to be reached quickly and allow the Auto Scaling group to scale down after the batch jobs are complete. What should the solutions architect do to meet these requirements?

- A. Increase the minimum capacity for the Auto Scaling group.
- B. Increase the maximum capacity for the Auto Scaling group.
- C. Configure scheduled scaling to scale up to the desired compute level.
- D. Change the scaling policy to add more EC2 instances during each scaling operation.

**Answer: C**

**Explanation:**

By configuring scheduled scaling, the solutions architect can set the Auto Scaling group to automatically scale up to the desired compute level at a specific time (IAM) when the batch job starts and then automatically scale down after the job is complete. This will allow the desired EC2 capacity to be reached quickly and also help in reducing the cost.

**NEW QUESTION 224**

- (Exam Topic 3)

A company is moving its data management application to AWS. The company wants to transition to an event-driven architecture. The architecture needs to be more distributed and to use serverless concepts while performing the different aspects of the workflow. The company also wants to minimize operational overhead. Which solution will meet these requirements?

- A. Build out the workflow in AWS Glue Use AWS Glue to invoke AWS Lambda functions to process the workflow steps
- B. Build out the workflow in AWS Step Functions Deploy the application on Amazon EC2 Instances Use Step Functions to invoke the workflow steps on the EC2 instances
- C. Build out the workflow in Amazon EventBridge
- D. Use EventBridge to invoke AWS Lambda functions on a schedule to process the workflow steps.
- E. Build out the workflow in AWS Step Functions Use Step Functions to create a state machine Use the state machine to invoke AWS Lambda functions to process the workflow steps

**Answer: C**

**NEW QUESTION 227**

- (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 228**

- (Exam Topic 3)

A company's reporting system delivers hundreds of .csv files to an Amazon S3 bucket each day. The company must convert these files to Apache Parquet format and must store the files in a transformed data bucket. Which solution will meet these requirements with the LEAST development effort?

- A. Create an Amazon EMR cluster with Apache Spark installed
- B. Write a Spark application to transform the data
- C. Use EMR File System (EMRFS) to write files to the transformed data bucket.
- D. Create an AWS Glue crawler to discover the data
- E. Create an AWS Glue extract, transform, and load (ETL) job to transform the data
- F. Specify the transformed data bucket in the output step.
- G. Use AWS Batch to create a job definition with Bash syntax to transform the data and output the data to the transformed data bucket
- H. Use the job definition to submit a job
- I. Specify an array job as the job type.
- J. Create an AWS Lambda function to transform the data and output the data to the transformed data bucket
- K. Configure an event notification for the S3 bucket
- L. Specify the Lambda function as the destination for the event notification.

**Answer: B**

**Explanation:**

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

**NEW QUESTION 229**

- (Exam Topic 3)

A solutions architect wants all new users to have specific complexity requirements and mandatory rotation periods for IAM user passwords. What should the solutions architect do to accomplish this?

- A. Set an overall password policy for the entire AWS account
- B. Set a password policy for each IAM user in the AWS account
- C. Use third-party vendor software to set password requirements
- D. Attach an Amazon CloudWatch rule to the Create\_newuser event to set the password with the appropriate requirements

Answer: A

#### NEW QUESTION 230

- (Exam Topic 3)

An application runs on an Amazon EC2 instance that has an Elastic IP address in VPC A. The application requires access to a database in VPC B. Both VPCs are in the same AWS account.

Which solution will provide the required access MOST securely?

- A. Create a DB instance security group that allows all traffic from the public IP address of the application server in VPC A.
- B. Configure a VPC peering connection between VPC A and VPC B.
- C. Make the DB instance publicly accessible.
- D. Assign a public IP address to the DB instance.
- E. Launch an EC2 instance with an Elastic IP address into VPC B.
- F. Proxy all requests through the new EC2 instance.

Answer: B

#### NEW QUESTION 235

- (Exam Topic 3)

A company is building a data analysis platform on AWS by using AWS Lake Formation. The platform will ingest data from different sources such as Amazon S3 and Amazon RDS. The company needs a secure solution to prevent access to portions of the data that contain sensitive information.

- A. Create an IAM role that includes permissions to access Lake Formation tables.
- B. Create data filters to implement row-level security and cell-level security.
- C. Create an AWS Lambda function that removes sensitive information before Lake Formation ingests the data.
- D. Create an AWS Lambda function that periodically queries and removes sensitive information from Lake Formation tables.

Answer: A

#### NEW QUESTION 237

- (Exam Topic 3)

A solutions architect must secure a VPC network that hosts Amazon EC2 instances. The EC2 instances contain highly sensitive data and run on a private subnet. According to company policy, the EC2 instances must run in the VPC and can access only approved third-party software repositories on the internet for software product updates that use the third party's URL. Other internet traffic must be blocked.

Which solution meets these requirements?

- A. Update the route table for the private subnet to route the outbound traffic to an AWS Network Firewall. Configure domain list rule groups.
- B. Set up an AWS WAF web ACL.
- C. Create a custom set of rules that filter traffic requests based on source and destination IP address range sets.
- D. Implement strict inbound security group rules. Configure an outbound rule that allows traffic only to the authorized software repositories on the internet by specifying the URLs.
- E. Configure an Application Load Balancer (ALB) in front of the EC2 instance.
- F. Direct an outbound traffic to the ALB. Use a URL-based rule listener in the ALB's target group for outbound access to the internet.

Answer: C

#### NEW QUESTION 238

- (Exam Topic 3)

A company is building a mobile app on AWS. The company wants to expand its reach to millions of users. The company needs to build a platform so that authorized users can watch the company's content on their mobile devices.

What should a solutions architect recommend to meet these requirements?

- A. Publish content to a public Amazon S3 bucket.
- B. Use AWS Key Management Service (AWS KMS) keys to stream content.
- C. Set up IPsec VPN between the mobile app and the AWS environment to stream content.
- D. Use Amazon CloudFront. Provide signed URLs to stream content.
- E. Set up AWS Client VPN between the mobile app and the AWS environment to stream content.

Answer: A

#### NEW QUESTION 243

- (Exam Topic 3)

A company is hosting a web application from an Amazon S3 bucket. The application uses Amazon Cognito as an identity provider to authenticate users and return a JSON Web Token (JWT) that provides access to protected resources that are stored in another S3 bucket.

Upon deployment of the application, users report errors and are unable to access the protected content. A solutions architect must resolve this issue by providing proper permissions so that users can access the protected content.

Which solution meets these requirements?

- A. Update the Amazon Cognito identity pool to assume the proper IAM role for access to the protected content.
- B. Update the S3 ACL to allow the application to access the protected content.
- C. Redeploy the application to Amazon S3 to prevent eventually consistent reads in the S3 bucket from affecting the ability of users to access the protected content.
- D. Update the Amazon Cognito pool to use custom attribute mappings within the identity pool and grant users the proper permissions to access the protected content.

Answer: B

#### NEW QUESTION 247

- (Exam Topic 3)

A company runs a web application that is backed by Amazon RDS. A new database administrator caused data loss by accidentally editing information in a database table. To help recover from this type of incident, the company wants the ability to restore the database to its state from 5 minutes before any change within the last 30 days.

Which feature should the solutions architect include in the design to meet this requirement?

- A. Read replicas
- B. Manual snapshots
- C. Automated backups
- D. Multi-AZ deployments

**Answer: C**

#### NEW QUESTION 251

- (Exam Topic 3)

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

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

**Answer: C**

#### Explanation:

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

#### NEW QUESTION 254

- (Exam Topic 3)

A company has an application that runs on several Amazon EC2 instances. Each EC2 instance has multiple Amazon Elastic Block Store (Amazon EBS) data volumes attached to it. The application's EC2 instance configuration and data need to be backed up nightly. The application also needs to be recoverable in a different AWS Region.

Which solution will meet these requirements in the MOST operationally efficient way?

- A. Write an AWS Lambda function that schedules nightly snapshots of the application's EBS volumes and copies the snapshots to a different Region
- B. Create a backup plan by using AWS Backup to perform nightly backups
- C. Copy the backups to another Region. Add the application's EC2 instances as resources
- D. Create a backup plan by using AWS Backup to perform nightly backups. Copy the backups to another Region. Add the application's EBS volumes as resources
- E. Write an AWS Lambda function that schedules nightly snapshots of the application's EBS volumes and copies the snapshots to a different Availability Zone

**Answer: B**

#### Explanation:

The most operationally efficient solution to meet these requirements would be to create a backup plan by using AWS Backup to perform nightly backups and copying the backups to another Region. Adding the application's EBS volumes as resources will ensure that the application's EC2 instance configuration and data are backed up, and copying the backups to another Region will ensure that the application is recoverable in a different AWS Region.

#### NEW QUESTION 258

- (Exam Topic 3)

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

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

Which solution will meet these requirements MOST cost-effectively?

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

**Answer: A**

**Explanation:**

Creating a peering connection between the two VPCs and configuring an inbound rule for the ElastiCache cluster's security group to allow inbound connection from the application's security group is the most cost-effective solution. Peering connections are free and you only incur the cost of configuring the security group rules. The Transit VPC solution requires additional VPCs and associated resources, which would incur additional costs.  
Before Testing | AWS Certification Information and Policies | AWS  
<https://aws.amazon.com/certification/policies/before-testing/>

**NEW QUESTION 262**

- (Exam Topic 3)

A company runs a fleet of web servers using an Amazon RDS for PostgreSQL DB instance. After a routine compliance check, the company sets a standard that requires a recovery point objective (RPO) of less than 1 second for all its production databases.

Which solution meets these requirements?

- A. Enable a Multi-AZ deployment for the DB Instance
- B. Enable auto scaling for the DB instance in one Availability Zone.
- C. Configure the DB instance in one Availability Zone and create multiple read replicas in a separate Availability Zone
- D. Configure the DB instance in one Availability Zone, and configure AWS Database Migration Service (AWS DMS) change data capture (CDC) tasks

**Answer: A**

**NEW QUESTION 264**

- (Exam Topic 3)

A company uses Amazon EC2 instances and AWS Lambda functions to run its application. The company has VPCs with public subnets and private subnets in its AWS account. The EC2 instances run in a private subnet in one of the VPCs. The Lambda functions need direct network access to the EC2 instances for the application to work.

The application will run for at least 1 year. The company expects the number of Lambda functions that the application uses to increase during that time. The company wants to maximize its savings on all application resources and to keep network latency between the services low.

Which solution will meet these requirements?

- A. Purchase on an EC2 instance Savings Plan
- B. Optimize the Lambda functions duration and memory usage and the number of invocations
- C. Connect the Lambda functions to the private subnet that contains the EC2 instances.
- D. Purchase on an EC2 instance Savings Plan
- E. Optimize the Lambda functions duration and memory usage and the number of invocations, and the amount of data that is transferred
- F. Connect the Lambda functions to a public subnet in the same VPC where the EC2 instances run.
- G. Purchase a Compute Savings Plan
- H. Optimize the Lambda functions duration and memory usage, the number of invocations, and the amount of data that is transferred. Connect the Lambda function to the Private subnet that contains the EC2 instances.
- I. Purchase a Compute Savings Plan
- J. Optimize the Lambda functions' duration and memory usage, the number of invocations, and the amount of data that is transferred. Keep the Lambda functions in the Lambda service VPC.

**Answer: C**

**NEW QUESTION 266**

- (Exam Topic 3)

A company runs demonstration environments for its customers on Amazon EC2 instances. Each environment is isolated in its own VPC. The company's operations team needs to be notified when RDP or SSH access to an environment has been established.

- A. Configure Amazon CloudWatch Application Insights to create AWS Systems Manager OpsItems when RDP or SSH access is detected.
- B. Configure the EC2 instances with an IAM instance profile that has an IAM role with the AmazonSSMManagedInstanceCore policy attached.
- C. Publish VPC flow logs to Amazon CloudWatch Log
- D. Create required metric filter
- E. Create an Amazon CloudWatch metric alarm with a notification action for when the alarm is in the ALARM state.
- F. Configure an Amazon EventBridge rule to listen for events of type EC2 Instance State-change Notification
- G. Configure an Amazon Simple Notification Service (Amazon SNS) topic as a target
- H. Subscribe the operations team to the topic.

**Answer: C**

**NEW QUESTION 269**

- (Exam Topic 3)

A company is experiencing sudden increases in demand. The company needs to provision large Amazon EC2 instances from an Amazon Machine Image (AMI). The instances will run in an Auto Scaling group. The company needs a solution that provides minimum initialization latency to meet the demand.

Which solution meets these requirements?

- A. Use the `aws ec2 register-image` command to create an AMI from a snapshot. Use AWS Step Functions to replace the AMI in the Auto Scaling group
- B. Enable Amazon Elastic Block Store (Amazon EBS) fast snapshot restore on a snapshot. Provision an AMI by using the snapshot. Replace the AMI in the Auto Scaling group with the new AMI
- C. Enable AMI creation and define lifecycle rules in Amazon Data Lifecycle Manager (Amazon DLM). Create an AWS Lambda function that modifies the AMI in the Auto Scaling group
- D. Use Amazon EventBridge (Amazon CloudWatch Events) to invoke AWS Backup lifecycle policies that provision AMIs. Configure Auto Scaling group capacity limits as an event source in EventBridge

**Answer: B**

**Explanation:**

Enabling Amazon Elastic Block Store (Amazon EBS) fast snapshot restore on a snapshot allows you to quickly create a new Amazon Machine Image (AMI) from a

snapshot, which can help reduce the initialization latency when provisioning new instances. Once the AMI is provisioned, you can replace the AMI in the Auto Scaling group with the new AMI. This will ensure that new instances are launched from the updated AMI and are able to meet the increased demand quickly.

**NEW QUESTION 272**

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