

# Amazon

## Exam Questions AWS-Solution-Architect-Associate

Amazon AWS Certified Solutions Architect - Associate



**NEW QUESTION 1**

- (Exam Topic 1)

A company is preparing to store confidential data in Amazon S3. For compliance reasons, the data must be encrypted at rest. Encryption key usage must be logged for auditing purposes. Keys must be rotated every year.

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

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

**Answer: D**

**Explanation:**

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

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

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

**NEW QUESTION 2**

- (Exam Topic 1)

A company runs a shopping application that uses Amazon DynamoDB to store customer information. In case of data corruption, a solutions architect needs to design a solution that meets a recovery point objective (RPO) of 15 minutes and a recovery time objective (RTO) of 1 hour.

What should the solutions architect recommend to meet these requirements?

- A. Configure DynamoDB global table
- B. For RPO recovery, point the application to a different AWS Region.
- C. Configure DynamoDB point-in-time recovery
- D. For RPO recovery, restore to the desired point in time.
- E. Export the DynamoDB data to Amazon S3 Glacier on a daily basis
- F. For RPO recovery, import the data from S3 Glacier to DynamoDB.
- G. Schedule Amazon Elastic Block Store (Amazon EBS) snapshots for the DynamoDB table every 15 minutes
- H. For RPO recovery, restore the DynamoDB table by using the EBS snapshot.

**Answer: B**

**Explanation:**

<https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/PointInTimeRecovery.html>

**NEW QUESTION 3**

- (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 database
- F. Configure the read replicas with half of the compute and storage resources as the source database.
- G. Create read replicas for the database
- 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 4**

- (Exam Topic 1)

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

Which AWS solution meets these requirements?

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

**Answer: D**

**Explanation:**

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

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

#### NEW QUESTION 5

- (Exam Topic 1)

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

What should a solutions architect do to accomplish this?

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

**Answer:** A

#### NEW QUESTION 6

- (Exam Topic 1)

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

What is the MOST secure way for the solutions architect to share the AMI with the MSP Partner's AWS account?

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

**Answer:** B

#### Explanation:

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

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

#### NEW QUESTION 7

- (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 8

- (Exam Topic 1)

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

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

What should a solutions architect do to meet these requirements?

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

**Answer:** C

#### NEW QUESTION 9

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

Which solution will satisfy these requirements?

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

**Answer: D**

**NEW QUESTION 10**

- (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. From this, Option D is the best choice; other options are ruled out [Option A - You can't introduce one more Queue in the existing one; Option B - only Permission; Option C - Only Retrieves Messages]. FIFO queues are designed to never introduce duplicate messages.

However, your message producer might introduce duplicates in certain scenarios: for example, if the producer sends a message, does not receive a response, and then resends the same message. Amazon SQS APIs provide deduplication functionality that prevents your message producer from sending duplicates. Any duplicates introduced by the message producer are removed within a 5-minute deduplication interval. For standard queues, you might occasionally receive a duplicate copy of a message (at-least- once delivery). If you use a standard queue, you must design your applications to be idempotent (that is, they must not be affected adversely when processing the same message more than once).

**NEW QUESTION 11**

- (Exam Topic 1)

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

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

Which solution will meet these requirements?

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



- J. Create an Amazon CloudFront distribution that uses the latency record as an origin.
- K. Deploy an Application Load Balancer (ALB) and an associated target group
- L. Associate the target group with the Auto Scaling group
- M. Create an Amazon Route 53 weighted record that points to aliases for each AL
- N. Deploy an Amazon CloudFront distribution that uses the weighted record as an origin.

**Answer: D**

**Explanation:**

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

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

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

**NEW QUESTION 16**

- (Exam Topic 1)

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

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

**Answer: AC**

**Explanation:**

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

[https://docs.aws.amazon.com/vpc/latest/userguide/VPC\\_SecurityGroups.html#SecurityGroupRules](https://docs.aws.amazon.com/vpc/latest/userguide/VPC_SecurityGroups.html#SecurityGroupRules)

**NEW QUESTION 19**

- (Exam Topic 1)

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

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

**Answer: D**

**Explanation:**

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

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

**NEW QUESTION 20**

- (Exam Topic 1)

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

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

**Answer: B**

**NEW QUESTION 24**

- (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 26

- (Exam Topic 1)

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

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

**Answer:** C

#### Explanation:

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

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

#### NEW QUESTION 27

- (Exam Topic 1)

A company is storing sensitive user information in an Amazon S3 bucket. The company wants to provide secure access to this bucket from the application tier running on Amazon EC2 instances inside a VPC. Which combination of steps should a solutions architect take to accomplish this? (Select TWO.)

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

**Answer:** AC

#### Explanation:

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

#### NEW QUESTION 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 32

- (Exam Topic 1)

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

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

What is the effect of this policy?

- A. Users can terminate an EC2 instance in any AWS Region except us-east-1.
- B. Users can terminate an EC2 instance with the IP address 10 100 100 1 in the us-east-1 Region
- C. Users can terminate an EC2 instance in the us-east-1 Region when the user's source IP is 10.100.100.254.
- D. Users cannot terminate an EC2 instance in the us-east-1 Region when the user's source IP is 10.100.100.254

**Answer:** C

**Explanation:**

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

**NEW QUESTION 34**

- (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 39**

- (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 configuratio
- E. Migrate all the data to FSx for Windows File Server.
- F. Extend the file share environment to Amazon Elastic File System (Amazon EFS) with a Multi-AZ configuratio
- G. Migrate all the data to Amazon EFS.

**Answer:** A

#### NEW QUESTION 42

- (Exam Topic 1)

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

Which solution meets these requirements?

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

**Answer:** D

#### Explanation:

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

#### NEW QUESTION 47

- (Exam Topic 1)

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

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

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

**Answer:** C

#### NEW QUESTION 50

- (Exam Topic 1)

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

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

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

**Answer:** A

#### NEW QUESTION 54

- (Exam Topic 1)

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

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

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

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

**Answer:** B

#### NEW QUESTION 57



- (Exam Topic 1)

A company has an Amazon S3 bucket that contains critical data. The company must protect the data from accidental deletion. Which combination of steps should a solutions architect take to meet these requirements? (Choose two.)

- A. Enable versioning on the S3 bucket.
- B. Enable MFA Delete on the S3 bucket.
- C. Create a bucket policy on the S3 bucket.
- D. Enable default encryption on the S3 bucket.
- E. Create a lifecycle policy for the objects in the S3 bucket.

**Answer:** AB

#### NEW QUESTION 62

- (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 AWS.
- B. Move the on-premises file data to FSx for Windows File Server.
- 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 65

- (Exam Topic 1)

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

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

**Answer:** B

#### Explanation:

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

#### NEW QUESTION 66

- (Exam Topic 1)

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

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

**Answer:** D

#### Explanation:

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

#### NEW QUESTION 67

- (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 URL.
- B. Import the public certificate associated with the company's domain name into AWS Certificate Manager (ACM).
- C. Create Route 53 DNS records with the company's domain name.
- D. Point the alias record to the Regional API Gateway stage endpoint.
- E. Import the public certificate associated with the company's domain name into AWS Certificate Manager (ACM) in the us-east-1 Region.

- F. Create a Regional API Gateway endpoint
- G. Associate the API Gateway endpoint with the company's domain name
- H. Import the public certificate associated with the company's domain name into AWS Certificate Manager (ACM) in the same Region
- I. Attach the certificate to the API Gateway endpoint
- J. Configure Route 53 to route traffic to the API Gateway endpoint.
- K. Create a Regional API Gateway endpoint
- L. Associate the API Gateway endpoint with the company's domain name
- M. Import the public certificate associated with the company's domain name into AWS Certificate Manager (ACM) in the us-east-1 Region
- N. Attach the certificate to the API Gateway APIs. Create Route 53 DNS records with the company's domain name
- 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 names.
- 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 CloudFront 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 CloudFront. 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 71

- (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. Management Service (AWS KMS) encryption key
- G. Migrate the credential file to the S3 bucket
- H. Point the application to the S3 bucket.
- I. Create an encrypted Amazon Elastic Block Store (Amazon EBS) volume (or each EC2 instance)
- J. Attach the new EBS volume to each EC2 instance
- K. Migrate the credential file to the new EBS volume
- L. Point the application to the new EBS volume.

**Answer: A**

#### Explanation:

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

#### NEW QUESTION 73

- (Exam Topic 1)

A company's website uses an Amazon EC2 instance store for its catalog of items. The company wants to make sure that the catalog is highly available and that the catalog is stored in a durable location.

What should a solutions architect do to meet these requirements?

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

**Answer: A**

#### NEW QUESTION 76

- (Exam Topic 1)

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

Which solution will meet these requirements MOST cost-effectively?

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

**Answer:** B

**Explanation:**

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

<https://aws.amazon.com/about-aws/whats-new/2021/11/amazon-s3-glacier-instant-retrieval-storage-class/>

**NEW QUESTION 79**

- (Exam Topic 1)

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

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

**Answer:** B

**Explanation:**

[https://aws.amazon.com/s3/storage-classes/?trk=66264cd8-3b73-416c-9693-ea7cf4fe846a&sc\\_channel=ps&s\\_k](https://aws.amazon.com/s3/storage-classes/?trk=66264cd8-3b73-416c-9693-ea7cf4fe846a&sc_channel=ps&s_k)

**NEW QUESTION 81**

- (Exam Topic 1)

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

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

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

**Answer:** AB

**NEW QUESTION 85**

- (Exam Topic 2)

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

What should a solutions architect do to meet these requirements?

- A. Configure an IAM policy for AWS Systems Manager Session Manager.
- B. Create an IAM role for the policy.
- C. Update the trust relationship of the role.
- D. Set up automatic start and stop for the DB instance.
- E. Create an Amazon ElastiCache for Redis cache cluster that gives users the ability to access the data from the cache when the DB instance is stopped.
- F. Invalidate the cache after the DB instance is started.
- G. Launch an Amazon EC2 instance.



- H. Create an IAM role that grants access to Amazon RD
- I. Attach the role to the EC2 instanc
- J. Configure a cron job to start and stop the EC2 instance on the desired schedule.
- K. Create AWS Lambda functions to start and stop the DB instanc
- L. Create Amazon EventBridge (Amazon CloudWatch Events) scheduled rules to invoke the Lambda function
- M. Configure the Lambda functions as event targets for the rules

**Answer: C**

#### NEW QUESTION 87

- (Exam Topic 2)

A company stores its application logs in an Amazon CloudWatch Logs log group. A new policy requires the company to store all application logs in Amazon OpenSearch Service (Amazon Elasticsearch Service) in near-real time.

Which solution will meet this requirement with the LEAST operational overhead?

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

**Answer: B**

#### Explanation:

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

#### NEW QUESTION 91

- (Exam Topic 2)

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

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

Which solution meets these requirements MOST cost-effectively?

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

**Answer: B**

#### NEW QUESTION 96

- (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 RD
- 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 crawle
- D. Use Amazon Athena to query the dat
- E. Use S3 policies to limit access.
- F. Create a data lake by using AWS Lake Formatio
- G. Create an AWS Glue JDBC connection to Amazon RD
- H. Register (he S3 bucket in Lake Formatio
- I. Use Lake Formation access controls to limit access.
- J. Create an Amazon Redshift cluste
- K. Schedule an AWS Lambda function to periodically copy data from Amazon S3 and Amazon RDS to Amazon Redshif
- L. Use Amazon Redshift access controls to limit access.

**Answer: D**

#### NEW QUESTION 99

- (Exam Topic 2)

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

Which solution will meet these requirements?

- A. Configure provisioned concurrency for the Lambda function Modify the database to be a global database in multiple AWS Regions
- B. Use Amazon RDS Proxy to create a proxy for the database Modify the Lambda function to use the RDS Proxy endpoint instead of the database endpoint
- C. Create a read replica for the database in a different AWS Region Use query string parameters in API Gateway to route traffic to the read replica



D. Migrate the data from Aurora PostgreSQL to Amazon DynamoDB by using AWS Database Migration Service (AWS DMS) | Modify the Lambda function to use the OynamoDB table

**Answer:** D

#### NEW QUESTION 101

- (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 cente
- 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 106

- (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 company wants to run applications in containers in the AWS Cloud. These applications are stateless and can tolerate disruptions within the underlying infrastructure. The company needs a solution that minimizes cost and operational overhead.

What should a solutions architect do to meet these requirements?

- A. Use Spot Instances in an Amazon EC2 Auto Scaling group to run the application containers.
- B. Use Spot Instances in an Amazon Elastic Kubernetes Service (Amazon EKS) managed node group.
- C. Use On-Demand Instances in an Amazon EC2 Auto Scaling group to run the application containers.
- D. Use On-Demand Instances in an Amazon Elastic Kubernetes Service (Amazon EKS) managed node group.

**Answer:** A

#### Explanation:

<https://aws.amazon.com/cn/blogs/compute/cost-optimization-and-resilience-eks-with-spot-instances/>

#### NEW QUESTION 115

- (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 116

- (Exam Topic 2)

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

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

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

**Answer:** A

**Explanation:**

[https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER\\_RestoreFromSnapshot.html#USER\\_Restor](https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_RestoreFromSnapshot.html#USER_Restor) Under "Encrypt unencrypted resources"

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

#### NEW QUESTION 120

- (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 124

- (Exam Topic 2)

A company has a highly dynamic batch processing job that uses many Amazon EC2 instances to complete it. The job is stateless in nature, can be started and stopped at any given time with no negative impact, and typically takes upwards of 60 minutes total to complete. The company has asked a solutions architect to design a scalable and cost-effective solution that meets the requirements of the job.

What should the solutions architect recommend?

- A. Implement EC2 Spot Instances
- B. Purchase EC2 Reserved Instances
- C. Implement EC2 On-Demand Instances
- D. Implement the processing on AWS Lambda

**Answer:** A

#### NEW QUESTION 129

- (Exam Topic 2)

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

Which action should the solutions architect take?

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

**Answer:** C

**Explanation:**

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

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

#### NEW QUESTION 134

- (Exam Topic 2)

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

Which solution will meet these requirements?

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

**Answer:** A

#### NEW QUESTION 139

- (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 use
- C. Grant the user read permission to objects in the S3 bucke
- 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 distributio
- 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 144

- (Exam Topic 2)

A company is planning to build a high performance computing (HPC) workload as a service solution that is hosted on AWS. A group of 16 Amazon EC2 Linux instances requires the lowest possible latency for node-to-node communication. The instances also need a shared block device volume for high-performing storage. Which solution will meet these requirements?

- A. Use a duster placement grou
- B. Attach a single Provisioned IOPS SSD Amazon Elastic Block Store (Amazon EBS) volume to all the instances by using Amazon EBS Multi-Attach
- C. Use a cluster placement grou
- D. Create shared file systems across the instances by using Amazon Elastic File System (Amazon EFS)
- E. Use a partition placement grou
- F. Create shared tile systems across the instances by using Amazon Elastic File System (Amazon EFS).
- G. Use a spread placement grou
- H. Attach a single Provisioned IOPS SSD Amazon Elastic Block Store (Amazon EBS) volume to all the instances by using Amazon EBS Multi-Attach

**Answer:** A

#### NEW QUESTION 146

- (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 instance
- 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 instance
- 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 149**

- (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 154**

- (Exam Topic 2)

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

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

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

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

**Answer:** C

**NEW QUESTION 157**

- (Exam Topic 2)

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

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

Which solution will meet these requirements?

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

**Answer:** D

**Explanation:**

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

**NEW QUESTION 158**

- (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 162**

- (Exam Topic 2)

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

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

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

**Answer:** A

**Explanation:**

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

**NEW QUESTION 164**

- (Exam Topic 2)

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

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

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

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

**Answer:** A

**NEW QUESTION 165**

- (Exam Topic 2)

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

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

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

**Answer:** A

**NEW QUESTION 170**

- (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 petabytes 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 172

- (Exam Topic 2)

A company needs to retain application logs files for a critical application for 10 years. The application team regularly accesses logs from the past month for troubleshooting, but logs older than 1 month are rarely accessed. The application generates more than 10 TB of logs per month. Which storage option meets these requirements MOST cost-effectively?

- A. Store the logs in Amazon S3. Use AWS Backup to move logs more than 1 month old to S3 Glacier Deep Archive.
- B. Store the logs in Amazon S3. Use S3 Lifecycle policies to move logs more than 1 month old to S3 Glacier Deep Archive.
- C. Store the logs in Amazon CloudWatch Logs. Use AWS Backup to move logs more than 1 month old to S3 Glacier Deep Archive.
- D. Store the logs in Amazon CloudWatch Logs. Use Amazon S3 Lifecycle policies to move logs more than 1 month old to S3 Glacier Deep Archive.

**Answer:** B

#### Explanation:

You need S3 to be able to archive the logs after one month. Cannot do that with CloudWatch Logs.

#### NEW QUESTION 177

- (Exam Topic 2)

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

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

**Answer:** B

#### Explanation:

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

#### NEW QUESTION 178

- (Exam Topic 3)

A company manages its own Amazon EC2 instances that run MySQL databases. The company is manually managing replication and scaling as demand increases or decreases. The company needs a new solution that simplifies the process of adding or removing compute capacity to or from its database tier as needed. The solution also must offer improved performance, scaling, and durability with minimal effort from operations. Which solution meets these requirements?

- A. Migrate the databases to Amazon Aurora Serverless for Aurora MySQL.
- B. Migrate the databases to Amazon Aurora Serverless for Aurora PostgreSQL.
- C. Combine the databases into one larger MySQL database.
- D. Run the larger database on larger EC2 instances.
- E. Create an EC2 Auto Scaling group for the database tier.
- F. Migrate the existing databases to the new environment.

**Answer:** A

#### Explanation:

<https://aws.amazon.com/rds/aurora/serverless/>

#### NEW QUESTION 182

- (Exam Topic 3)

A company needs to export its database once a day to Amazon S3 for other teams to access. The exported object size varies between 2 GB and 5 GB. The S3 access pattern for the data is variable and changes rapidly. The data must be immediately available and must remain accessible for up to 3 months. The company needs the most cost-effective solution that will not increase retrieval time. Which S3 storage class should the company use to meet these requirements?

- A. S3 Intelligent-Tiering
- B. S3 Glacier Instant Retrieval
- C. S3 Standard
- D. S3 Standard-Infrequent Access (S3 Standard-IA)

**Answer:** D

**Explanation:**

S3 Intelligent-Tiering is a cost-optimized storage class that automatically moves data to the most cost-effective access tier based on changing access patterns. Although it offers cost savings, it also introduces additional latency and retrieval time into the data retrieval process, which may not meet the requirement of "immediately available" data. On the other hand, S3 Standard-Infrequent Access (S3 Standard-IA) provides low cost storage with low latency and high throughput performance. It is designed for infrequently accessed data that can be recreated if lost, and can be retrieved in a timely manner if required. It is a cost-effective solution that meets the requirement of immediately available data and remains accessible for up to 3 months.

**NEW QUESTION 184**

- (Exam Topic 3)

A company hosts a multi-tier web application that uses an Amazon Aurora MySQL DB cluster for storage. The application tier is hosted on Amazon EC2 instances. The company's IT security guidelines mandate that the database credentials be encrypted and rotated every 14 days. What should a solutions architect do to meet this requirement with the LEAST operational effort?

- A. Create a new AWS Key Management Service (AWS KMS) encryption key. Use AWS Secrets Manager to create a new secret that uses the KMS key with the appropriate credentials. Associate the secret with the Aurora DB cluster. Configure a custom rotation period of 14 days.
- B. Create two parameters in AWS Systems Manager Parameter Store: one for the user name as a string parameter and one that uses the SecureString type for the password. Select AWS Key Management Service (AWS KMS) encryption for the password parameter, and load these parameters in the application tier. Implement an AWS Lambda function that rotates the password every 14 days.
- C. Store a file that contains the credentials in an AWS Key Management Service (AWS KMS) encrypted Amazon Elastic File System (Amazon EFS) file system. Mount the EFS file system in all EC2 instances of the application tier.
- D. Restrict the access to the file on the file system so that the application can read the file and that only super users can modify the file. Implement an AWS Lambda function that rotates the key in Aurora every 14 days and writes new credentials into the file.
- E. Store a file that contains the credentials in an AWS Key Management Service (AWS KMS) encrypted Amazon S3 bucket that the application uses to load the credentials. Download the file to the application regularly to ensure that the correct credentials are used. Implement an AWS Lambda function that rotates the Aurora credentials every 14 days and uploads these credentials to the file in the S3 bucket.

**Answer:** A

**NEW QUESTION 189**

- (Exam Topic 3)

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

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

**Answer:** D

**NEW QUESTION 192**

- (Exam Topic 3)

A company runs a public three-tier web application in a VPC. The application runs on Amazon EC2 instances across multiple Availability Zones. The EC2 instances that run in private subnets need to communicate with a license server over the internet. The company needs a managed solution that minimizes operational maintenance. Which solution meets these requirements?

- A. Provision a NAT instance in a public subnet. Modify each private subnet's route table with a default route that points to the NAT instance.
- B. Provision a NAT instance in a private subnet. Modify each private subnet's route table with a default route that points to the NAT instance.
- C. Provision a NAT gateway in a public subnet. Modify each private subnet's route table with a default route that points to the NAT gateway.
- D. Provision a NAT gateway in a private subnet. Modify each private subnet's route table with a default route that points to the NAT gateway.

**Answer:** C

**NEW QUESTION 195**

- (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 198**

- (Exam Topic 3)



A company has a web application that is based on Java and PHP. The company plans to move the application from on-premises to AWS. The company needs the ability to test new site features frequently. The company also needs a highly available and managed solution that requires minimum operational overhead. Which solution will meet these requirements?

- A. Create an Amazon S3 bucket. Enable static web hosting on the S3 bucket. Upload the static content to the S3 bucket. Use AWS Lambda to process all dynamic content.
- B. Deploy the web application to an AWS Elastic Beanstalk environment. Use URL swapping to switch between multiple Elastic Beanstalk environments for feature testing.
- C. Deploy the web application to Amazon EC2 instances that are configured with Java and PHP. Use Auto Scaling groups and an Application Load Balancer to manage the website's availability.
- D. Containerize the web application. Deploy the web application to Amazon EC2 instances. Use the AWS Load Balancer Controller to dynamically route traffic between containers that contain the new site features for testing.

**Answer: B**

#### NEW QUESTION 200

- (Exam Topic 3)

A financial company hosts a web application on AWS. The application uses an Amazon API Gateway Regional API endpoint to give users the ability to retrieve current stock prices. The company's security team has noticed an increase in the number of API requests. The security team is concerned that HTTP flood attacks might take the application offline.

A solutions architect must design a solution to protect the application from this type of attack. Which solution meets these requirements with the LEAST operational overhead?

- A. Create an Amazon CloudFront distribution in front of the API Gateway Regional API endpoint with a maximum TTL of 24 hours.
- B. Create a Regional AWS WAF web ACL with a rate-based rule.
- C. Associate the web ACL with the API Gateway stage.
- D. Use Amazon CloudWatch metrics to monitor the Count metric and alert the security team when the predefined rate is reached.
- E. Create an Amazon CloudFront distribution with Lambda@Edge in front of the API Gateway Regional API endpoint. Create an AWS Lambda function to block requests from IP addresses that exceed the predefined rate.

**Answer: B**

#### NEW QUESTION 203

- (Exam Topic 3)

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

The files are stored in an on-premises Windows file server. However, due to an increase in remote usage, the file server is out of capacity. Which solution will meet these requirements?

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

**Answer: C**

#### NEW QUESTION 204

- (Exam Topic 3)

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

- A. Create multiple Amazon Kinesis data streams based on the quote type. Configure the web application to send messages to the proper data stream. Configure each backend group of application servers to use the Kinesis Client Library (KCL) to pull messages from its own data stream.
- B. Create an AWS Lambda function and an Amazon Simple Notification Service (Amazon SNS) topic for each quote type. Subscribe the Lambda function to its associated SNS topic. Configure the application to publish requests for quotes to the appropriate SNS topic.
- C. Create a single Amazon Simple Notification Service (Amazon SNS) topic. Subscribe Amazon Simple Queue Service (Amazon SQS) queues to the SNS topic. Configure SNS message filtering to publish messages to the proper SQS queue based on the quote type. Configure each backend application server to use its own SQS queue.
- D. Create multiple Amazon Kinesis Data Firehose delivery streams based on the quote type to deliver data streams to an Amazon Elasticsearch Service (Amazon ES) cluster. Configure the application to send messages to the proper delivery stream. Configure each backend group of application servers to search for the messages from Amazon ES and process them accordingly.

**Answer: C**

#### NEW QUESTION 209

- (Exam Topic 3)

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

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



**Answer:** A

#### NEW QUESTION 212

- (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 213

- (Exam Topic 3)

A company has deployed a server less application that invokes an AWS Lambda function when new documents are uploaded to an Amazon S3 bucket The application uses the Lambda function to process the documents After a recent marketing campaign the company noticed that the application did not process many of The documents

What should a solutions architect do to improve the architecture of this application?

- A. Set the Lambda function's runtime timeout value to 15 minutes
- B. Configure an S3 bucket replication policy Stage the documents m the S3 bucket for later processing
- C. Deploy an additional Lambda function Load balance the processing of the documents across the two Lambda functions
- D. Create an Amazon Simple Queue Service (Amazon SOS) queue Send the requests to the queue Configure the queue as an event source for Lambda.

**Answer:** B

#### NEW QUESTION 218

- (Exam Topic 3)

A company is using a fleet of Amazon EC2 instances to ingest data from on-premises data sources. The data is in JSON format and Ingestion rates can be as high as 1 MB/s. When an EC2 instance is rebooted, the data in-flight is lost. The company's data science team wants to query Ingested data In near-real time.

Which solution provides near-real -time data querying that is scalable with minimal data loss?

- A. Publish data to Amazon Kinesis Data Streams Use Kinesis data Analytics to query the data.
- B. Publish data to Amazon Kinesis Data Firehose with Amazon Redshift as the destination Use Amazon Redshift to query the data
- C. Store ingested data m an EC2 Instance store Publish data to Amazon Kinesis Data Firehose with Amazon S3 as the destinatio
- D. Use Amazon Athena to query the data.
- E. Store ingested data m an Amazon Elastic Block Store (Amazon EBS) volume Publish data to Amazon ElastiCache tor Red Subscribe to the Redis channel to query the data

**Answer:** B

#### NEW QUESTION 222

- (Exam Topic 3)

A solutions architect needs to design a highly available application consisting of web, application, and database tiers. HTTPS content delivery should be as close to the edge as possible, with the least delivery time.

Which solution meets these requirements and is MOST secure?

- A. Configure a public Application Load Balancer (ALB) with multiple redundant Amazon EC2 instances in public subnet
- B. Configure Amazon CloudFront to deliver HTTPS content using the public ALB as the origin.
- C. Configure a public Application Load Balancer with multiple redundant Amazon EC2 instances in private subnet
- D. Configure Amazon CloudFront to deliver HTTPS content using the EC2 instances as the origin.
- E. Configure a public Application Load Balancer (ALB) with multiple redundant Amazon EC2 instances in private subnet
- F. Configure Amazon CloudFront to deliver HTTPS content using the public ALB as the origin.
- G. Configure a public Application Load Balancer with multiple redundant Amazon EC2 instances in public subnet
- H. Configure Amazon CloudFront to deliver HTTPS content using the EC2 instances as the origin.

**Answer:** C

#### Explanation:

This solution meets the requirements for a highly available application with web, application, and database tiers, as well as providing edge-based content delivery. Additionally, it maximizes security by having the ALB in a private subnet, which limits direct access to the web servers, while still being able to serve traffic over the Internet via the public ALB. This will ensure that the web servers are not exposed to the public Internet, which reduces the attack surface and provides a secure way to access the application.

#### NEW QUESTION 227

- (Exam Topic 3)

A company has a web application with sporadic usage patterns There is heavy usage at the beginning of each month moderate usage at the start of each week

and unpredictable usage during the week. The application consists of a web server and a MySQL database server running inside the data center. The company would like to move the application to the AWS Cloud and needs to select a cost-effective database platform that will not require database modifications. Which solution will meet these requirements?

- A. Amazon DynamoDB
- B. Amazon RDS for MySQL
- C. MySQL-compatible Amazon Aurora Serverless
- D. MySQL deployed on Amazon EC2 in an Auto Scaling group

**Answer:** B

#### NEW QUESTION 229

- (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 231

- (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 236

- (Exam Topic 3)

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

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

Which solution will meet these requirements?

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

**Answer:** C

#### NEW QUESTION 239

- (Exam Topic 3)

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

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

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

**Answer:** CE

**Explanation:**

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

**NEW QUESTION 244**

- (Exam Topic 3)

A company is building a new dynamic ordering website. The company wants to minimize server maintenance and patching. The website must be highly available and must scale read and write capacity as quickly as possible to meet changes in user demand.

Which solution will meet these requirements?

- A. Host static content in Amazon S3 Host dynamic content by using Amazon API Gateway and AWS Lambda Use Amazon DynamoDB with on-demand capacity for the database Configure Amazon CloudFront to deliver the website content
- B. Host static content in Amazon S3 Host dynamic content by using Amazon API Gateway and AWS Lambda Use Amazon Aurora with Aurora Auto Scaling for the database Configure Amazon CloudFront to deliver the website content
- C. Host all the website content on Amazon EC2 instances Create an Auto Scaling group to scale the EC2 instances Use an Application Load Balancer to distribute traffic Use Amazon DynamoDB with provisioned write capacity for the database
- D. Host all the website content on Amazon EC2 instances Create an Auto Scaling group to scale the EC2 instances Use an Application Load Balancer to distribute traffic Use Amazon Aurora with Aurora Auto Scaling for the database

**Answer:** A

**NEW QUESTION 245**

- (Exam Topic 3)

A company is moving its on-premises Oracle database to Amazon Aurora PostgreSQL. The database has several applications that write to the same tables. The applications need to be migrated one by one with a month in between each migration. Management has expressed concerns that the database has a high number of reads and writes. The data must be kept in sync across both databases throughout the migration.

What should a solutions architect recommend?

- A. Use AWS DataSync for the initial migration
- B. Use AWS Database Migration Service (AWS DMS) to create a change data capture (CDC) replication task and a table mapping to select all tables.
- C. Use AWS DataSync for the initial migration
- D. Use AWS Database Migration Service (AWS DMS) to create a full load plus change data capture (CDC) replication task and a table mapping to select all tables.
- E. Use the AWS Schema Conversion Tool with AWS Database Migration Service (AWS DMS) using a memory optimized replication instance
- F. Create a full load plus change data capture (CDC) replication task and a table mapping to select all tables.
- G. Use the AWS Schema Conversion Tool with AWS Database Migration Service (AWS DMS) using a compute optimized replication instance
- H. Create a full load plus change data capture (CDC) replication task and a table mapping to select the largest tables.

**Answer:** C

**NEW QUESTION 249**

- (Exam Topic 3)

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

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

**Answer:** A

**Explanation:**

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

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

**NEW QUESTION 252**

- (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 254**

- (Exam Topic 3)

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

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

- A. Take snapshots of Amazon Elastic Block Store (Amazon EBS) volumes of the EC2 instances and database every 2 hours to meet the RPO
- B. Configure a snapshot lifecycle policy to take Amazon Elastic Block Store (Amazon EBS) snapshots. Enable automated backups in Amazon RDS to meet the

RPO

C. Retain the latest Amazon Machine Images (AMIs) of the web and application tiers Enable automated backups in Amazon RDS and use point-in-time recovery to meet the RPO

D. Take snapshots of Amazon Elastic Block Store (Amazon EBS) volumes of the EC2 instances every 2 hours Enable automated backups in Amazon RDS and use point-in-time recovery to meet the RPO

**Answer: D**

#### NEW QUESTION 256

- (Exam Topic 3)

An Amazon EC2 instance is located in a private subnet in a new VPC. This subnet does not have outbound internet access, but the EC2 instance needs the ability to download monthly security updates from an outside vendor.

What should a solutions architect do to meet these requirements?

- A. Create an internet gateway, and attach it to the VP
- B. Configure the private subnet route table to use the internet gateway as the default route.
- C. Create a NAT gateway, and place it in a public subne
- D. Configure the private subnet route table to use the NAT gateway as the default route.
- E. Create a NAT instance, and place it in the same subnet where the EC2 instance is locate
- F. Configure the private subnet route table to use the NAT instance as the default route.
- G. Create an internet gateway, and attach it to the VP
- H. Create a NAT instance, and place it in the same subnet where the EC2 instance is locate
- I. Configure the private subnet route table to use the internet gateway as the default route.

**Answer: B**

#### Explanation:

This approach will allow the EC2 instance to access the internet and download the monthly security updates while still being located in a private subnet. By creating a NAT gateway and placing it in a public subnet, it will allow the instances in the private subnet to access the internet through the NAT gateway. And then, configure the private subnet route table to use the NAT gateway as the default route. This will ensure that all outbound traffic is directed through the NAT gateway, allowing the EC2 instance to access the internet while still maintaining the security of the private subnet.

#### NEW QUESTION 258

- (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 applicationserver in VPC A.
- B. Configure a VPC peering connection between VPC A and VPC B.
- C. Make the DB instance publicly accessibl
- D. Assign a public IP address to the DB instance.
- E. Launch an EC2 instance with an Elastic IP address into VPC
- F. Proxy all requests through the new EC2 instance.

**Answer: B**

#### NEW QUESTION 260

- (Exam Topic 3)

A company is developing a real-time multiplayer game that uses UDP for communications between the client and servers In an Auto Scaling group Spikes in demand are anticipated during the day, so the game server platform must adapt accordingly Developers want to store gamer scores and other non-relational data in a database solution that will scale without intervention

Which solution should a solutions architect recommend?

- A. Use Amazon Route 53 for traffic distribution and Amazon Aurora Serverless for data storage
- B. Use a Network Load Balancer for traffic distribution and Amazon DynamoDB on-demand for data storage
- C. Use a Network Load Balancer for traffic distribution and Amazon Aurora Global Database for data storage
- D. Use an Application Load Balancer for traffic distribution and Amazon DynamoDB global tables for data storage

**Answer: B**

#### NEW QUESTION 263

- (Exam Topic 3)

A company is developing a marketing communications service that targets mobile app users. The company needs to send confirmation messages with Short Message Service (SMS) to its users. The users must be able to reply to the SMS messages. The company must store the responses for a year for analysis.

What should a solutions architect do to meet these requirements?

- A. Create an Amazon Connect contact flow to send the SMS message
- B. Use AWS Lambda to process the responses.
- C. Build an Amazon Pinpoint journe
- D. Configure Amazon Pinpoint to send events to an Amazon Kinesis data stream for analysis and archiving.
- E. Use Amazon Simple Queue Service (Amazon SQS) to distribute the SMS message
- F. Use AWS Lambda to process the responses.
- G. Create an Amazon Simple Notification Service (Amazon SNS) FIFO topi
- H. Subscribe an Amazon Kinesis data stream to the SNS topic for analysis and archiving.

**Answer: B**

#### Explanation:



<https://aws.amazon.com/pinpoint/product-details/sms/> Two-Way Messaging: Receive SMS messages from your customers and reply back to them in a chat-like interactive experience. With Amazon Pinpoint, you can create automatic responses when customers send you messages that contain certain keywords. You can even use Amazon Lex to create conversational bots. A majority of mobile phone users read incoming SMS messages almost immediately after receiving them. If you need to be able to provide your customers with urgent or important information, SMS messaging may be the right solution for you. You can use Amazon Pinpoint to create targeted groups of customers, and then send them campaign-based messages. You can also use Amazon Pinpoint to send direct messages, such as appointment confirmations, order updates, and one-time passwords.

**NEW QUESTION 266**

- (Exam Topic 3)

A company experienced a breach that affected several applications in its on-premises data center. The attacker took advantage of vulnerabilities in the custom applications that were running on the servers. The company is now migrating its applications to run on Amazon EC2 instances. The company wants to implement a solution that actively scans for vulnerabilities on the EC2 instances and sends a report that details the findings.

Which solution will meet these requirements?

- A. Deploy AWS Shield to scan the EC2 instances for vulnerabilities. Create an AWS Lambda function to log any findings to AWS CloudTrail.
- B. Deploy Amazon Macie and AWS Lambda functions to scan the EC2 instances for vulnerabilities. Log any findings to AWS CloudTrail.
- C. Turn on Amazon GuardDuty. Deploy the GuardDuty agents to the EC2 instances. Configure an AWS Lambda function to automate the generation and distribution of reports that detail the findings.
- D. Turn on Amazon Inspector. Deploy the Amazon Inspector agent to the EC2 instances. Configure an AWS Lambda function to automate the generation and distribution of reports that detail the findings.

**Answer:** D

**NEW QUESTION 268**

- (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 in a private subnet. According to company policy, the EC2 instances that run in the VPC 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 272**

- (Exam Topic 3)

A company's security team requests that network traffic be captured in VPC Flow Logs. The logs will be frequently accessed for 90 days and then accessed intermittently.

What should a solutions architect do to meet these requirements when configuring the logs?

- A. Use Amazon CloudWatch as the target.
- B. Set the CloudWatch log group with an expiration of 90 days.
- C. Use Amazon Kinesis as the target.
- D. Configure the Kinesis stream to always retain the logs for 90 days.
- E. Use AWS CloudTrail as the target.
- F. Configure CloudTrail to save to an Amazon S3 bucket, and enable S3 Intelligent-Tiering.
- G. Use Amazon S3 as the target.
- H. Enable an S3 Lifecycle policy to transition the logs to S3 Standard-Infrequent Access (S3 Standard-IA) after 90 days.

**Answer:** D

**Explanation:**

There's a table here that specifies that VPC Flow logs can go directly to S3. Does not need to go via CloudTrail and then to S3. Nor via CW.

<https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/AWS-logs-and-resource-policy.html#AWS-logs-i>

**NEW QUESTION 273**

- (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 274**

- (Exam Topic 3)

A medical research lab produces data that is related to a new study. The lab wants to make the data available with minimum latency to clinics across the country.

for their on-premises, file-based applications. The data files are stored in an Amazon S3 bucket that has read-only permissions for each clinic. What should a solutions architect recommend to meet these requirements?

- A. Deploy an AWS Storage Gateway file gateway as a virtual machine (VM) on premises at each clinic
- B. Migrate the files to each clinic's on-premises applications by using AWS DataSync for processing.
- C. Deploy an AWS Storage Gateway volume gateway as a virtual machine (VM) on premises at each clinic.
- D. Attach an Amazon Elastic File System (Amazon EFS) file system to each clinic's on-premises servers.

**Answer:** A

**Explanation:**

AWS Storage Gateway is a service that connects an on-premises software appliance with cloud-based storage to provide seamless and secure integration between an organization's on-premises IT environment and AWS's storage infrastructure. By deploying a file gateway as a virtual machine on each clinic's premises, the medical research lab can provide low-latency access to the data stored in the S3 bucket while maintaining read-only permissions for each clinic. This solution allows the clinics to access the data files directly from their on-premises file-based applications without the need for data transfer or migration.

**NEW QUESTION 276**

- (Exam Topic 3)

What should a solutions architect do to ensure that all objects uploaded to an Amazon S3 bucket are encrypted?

- A. Update the bucket policy to deny if the PutObject does not have an s3 x-amz-acl header set
- B. Update the bucket policy to deny if the PutObject does not have an s3:x-amz-aci header set to private.
- C. Update the bucket policy to deny if the PutObject does not have an aws SecureTransport header set to true
- D. Update the bucket policy to deny if the PutObject does not have an x-amz-server-side-encryption header set.

**Answer:** D

**Explanation:**

<https://aws.amazon.com/blogs/security/how-to-prevent-uploads-of-unencrypted-objects-to-amazon-s3/#:~:text=>

**NEW QUESTION 277**

- (Exam Topic 3)

The customers of a finance company request appointments with financial advisors by sending text messages. A web application that runs on Amazon EC2 instances accepts the appointment requests. The text messages are published to an Amazon Simple Queue Service (Amazon SQS) queue through the web application. Another application that runs on EC2 instances then sends meeting invitations and meeting confirmation email messages to the customers. After successful scheduling, this application stores the meeting information in an Amazon DynamoDB database.

As the company expands, customers report that their meeting invitations are taking longer to arrive. What should a solutions architect recommend to resolve this issue?

- A. Add a DynamoDB Accelerator (DAX) cluster in front of the DynamoDB database.
- B. Add an Amazon API Gateway API in front of the web application that accepts the appointment requests.
- C. Add an Amazon CloudFront distributio
- D. Set the origin as the web application that accepts the appointment requests.
- E. Add an Auto Scaling group for the application that sends meeting invitation
- F. Configure the Auto Scaling group to scale based on the depth of the SQS queue.

**Answer:** D

**Explanation:**

To resolve the issue of longer delivery times for meeting invitations, the solutions architect can recommend adding an Auto Scaling group for the application that sends meeting invitations and configuring the Auto Scaling group to scale based on the depth of the SQS queue. This will allow the application to scale up as the number of appointment requests increases, improving the performance and delivery times of the meeting invitations.

**NEW QUESTION 279**

- (Exam Topic 3)

A developer has an application that uses an AWS Lambda function to upload files to Amazon S3 and needs the required permissions to perform the task. The developer already has an IAM user with valid IAM credentials required for Amazon S3.

What should a solutions architect do to grant the permissions?

- A. Add required IAM permissions in the resource policy of the Lambda function
- B. Create a signed request using the existing IAM credentials in the Lambda function
- C. Create a new IAM user and use the existing IAM credentials in the Lambda function.
- D. Create an IAM execution role with the required permissions and attach the IAM role to the Lambda function

**Answer:** D

**NEW QUESTION 280**

- (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 VPCs 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.

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**NEW QUESTION 284**

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