Exam Questions AWS-Solution-Architect-Associate

Amazon AWS Certified Solutions Architect - Associate

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NEW QUESTION 1
- (Topic 4)
A solutions architect needs to design the architecture for an application that a vendor provides as a Docker container image The container needs 50 GB of storage available for temporary files The infrastructure must be serverless.
Which solution meets these requirements with the LEAST operational overhead?

A. Create an AWS Lambda function that uses the Docker container image with an Amazon S3 mounted volume that has more than 50 GB of space
B. Create an AWS Lambda function that uses the Docker container image with an Amazon Elastic Block Store (Amazon EBS) volume that has more than 50 GB of space
C. Create an Amazon Elastic Container Service (Amazon ECS) cluster that uses the AWS Fargate launch type Create a task definition for the container image with an Amazon Elastic File System (Amazon EFS) volum
D. Create a service with that task definition.
E. Create an Amazon Elastic Container Service (Amazon ECS) cluster that uses the Amazon EC2 launch type with an Amazon Elastic Block Store (Amazon EBS) volume that has more than 50 GB of space Create a task definition for the container imag
F. Create a service with that task definition.

Answer: C

Explanation:
The AWS Fargate launch type is a serverless way to run containers on Amazon ECS,
without having to manage any underlying infrastructure. You only pay for the resources required to run your containers, and AWS handles the provisioning, scaling, and security of the cluster. Amazon EFS is a fully managed, elastic, and scalable file system that can be mounted to multiple containers, and provides high availability and durability. By using AWS Fargate and Amazon EFS, you can run your Docker container image with 50 GB of storage available for temporary files, with the least operational overhead. This solution meets the requirements of the question.
References:
? AWS Fargate
? Amazon Elastic File System
? Using Amazon EFS file systems with Amazon ECS

NEW QUESTION 2
- (Topic 4)
A company migrated a MySQL database from the company's on-premises data center to an Amazon RDS for MySQL DB instance. The company sized the RDS DB instance to meet the company's average daily workload. Once a month, the database performs slowly when the company runs queries for a report. The company wants to have the ability to run reports and maintain the performance of the daily workloads.
Which solution will meet these requirements?

A. Create a read replica of the databas
B. Direct the queries to the read replica.
C. Create a backup of the databas
D. Restore the backup to another DB instanc
E. Direct the queries to the new database.
F. Export the data to Amazon S3. Use Amazon Athena to query the S3 bucket.
G. Resize the DB instance to accommodate the additional workload.

Answer: C

Explanation:
Amazon Athena is a service that allows you to run SQL queries on data stored in Amazon S3. It is serverless, meaning you do not need to provision or manage any infrastructure. You only pay for the queries you run and the amount of data scanned1.
By using Amazon Athena to query your data in Amazon S3, you can achieve the following benefits:
? You can run queries for your report without affecting the performance of your
Amazon RDS for MySQL DB instance. You can export your data from your DB instance to an S3 bucket and use Athena to query the data in the bucket. This way, you can avoid the overhead and contention of running queries on your DB instance.
? You can reduce the cost and complexity of running queries for your report. You do
not need to create a read replica or a backup of your DB instance, which would incur additional charges and require maintenance. You also do not need to resize your DB instance to accommodate the additional workload, which would increase your operational overhead.
? You can leverage the scalability and flexibility of Amazon S3 and Athena. You can
store large amounts of data in S3 and query them with Athena without worrying about capacity or performance limitations. You can also use different formats, compression methods, and partitioning schemes to optimize your data storage and query performance1.

NEW QUESTION 3
- (Topic 4)
A company wants to use an AWS CloudFormatlon stack for its application in a test environment. The company stores the CloudFormation template in an Amazon S3 bucket that blocks public access. The company wants to grant CloudFormation access to the template in the S3 bucket based on specific user requests to create the test environment The solution must follow security best practices.
Which solution will meet these requirements?

A. Create a gateway VPC endpoint for Amazon S3. Configure the CloudFormation stack to use the S3 object URL
B. Create an Amazon API Gateway REST API that has the S3 bucket as the targe
C. Configure the CloudFormat10n stack to use the API Gateway URL _
D. Create a presigned URL for the template object_ Configure the CloudFormation stack to use the presigned URL.
E. Allow public access to the template object in the S3 bucke
F. Block the public access after the test environment is created

Answer: C

Explanation:
it allows CloudFormation to access the template in the S3 bucket without granting public access or creating additional resources. A presigned URL is a URL that is signed with the access key of an IAM user or role that has permission to access the object. The presigned URL can be used by anyone who receives it, but it

expires after a specified time. By creating a presigned URL for the template object and configuring the CloudFormation stack to use it, the company can grant CloudFormation access to the template based on specific user requests and follow security best practices. References:
? Using Amazon S3 Presigned URLs
? Using Amazon S3 Buckets

NEW QUESTION 4
- (Topic 4)
A company is moving its data and applications to AWS during a multiyear migration project. The company wants to securely access data on Amazon S3 from the company's AWS Region and from the company's on-premises location. The data must not traverse the internet. The company has established an AWS Direct Connect connection between its Region and its on-premises location
Which solution will meet these requirements?

A. Create gateway endpoints for Amazon S3. Use the gateway endpoints to securely access the data from the Region and the on-premises location.
B. Create a gateway in AWS Transit Gateway to access Amazon S3 securely from the Region and the on-premises location.
C. Create interface endpoints for Amazon S3_ Use the interface endpoints to securely access the data from the Region and the on-premises location.
D. Use an AWS Key Management Service (AWS KMS) key to access the data securely from the Region and the on-premises location.

Answer: B

Explanation:
A gateway endpoint is a gateway that is a target for a specified route in your route table, used for traffic destined to a supported AWS service1. Amazon S3 does not support gateway endpoints, only interface endpoints2. Therefore, option A is incorrect.
An interface endpoint is an elastic network interface with a private IP address that serves as an entry point for traffic destined to a supported service1. An interface endpoint can provide secure access to Amazon S3 from within the Region, but not from the on-premises location. Therefore, option C is incorrect.
AWS Key Management Service (AWS KMS) is a service that allows you to create and manage encryption keys to protect your data3. AWS KMS does not provide a way to access data on Amazon S3 without traversing the internet. Therefore, option D is incorrect. AWS Transit Gateway is a service that enables you to connect your Amazon Virtual Private Clouds (VPCs) and your on-premises networks to a single gateway. You can create a gateway in AWS Transit Gateway to access Amazon S3 securely from both the Region and the on-premises location using AWS Direct Connect. Therefore, option B is correct.

NEW QUESTION 5
- (Topic 4)
A company has an application that uses Docker containers in its local data center The application runs on a container host that stores persistent data in a volume on the host. The container instances use the stored persistent data.
The company wants to move the application to a fully managed service because the company does not want to manage any servers or storage infrastructure.
Which solution will meet these requirements?

A. Use Amazon Elastic Kubernetes Service (Amazon EKS) with self-managed node
B. Create an Amazon Elastic Block Store (Amazon EBS) volume attached to an Amazon EC2 instanc
C. Use the EBS volume as a persistent volume mounted in the containers.
D. Use Amazon Elastic Container Service (Amazon ECS) with an AWS Fargate launch typ
E. Create an Amazon Elastic File System (Amazon EFS) volum
F. Add the EFS volumeas a persistent storage volume mounted in the containers.
G. Use Amazon Elastic Container Service (Amazon ECS) with an AWS Fargate launch typ
H. Create an Amazon S3 bucke
I. Map the S3 bucket as a persistent storage volume mounted in the containers.
J. Use Amazon Elastic Container Service (Amazon ECS) with an Amazon EC2 launch typ
K. Create an Amazon Elastic File System (Amazon EFS) volum
L. Add the EFS volume as a persistent storage volume mounted in the containers.

Answer: B

Explanation:
This solution meets the requirements because it allows the company to move the application to a fully managed service without managing any servers or storage infrastructure. AWS Fargate is a serverless compute engine for containers that runs the Amazon ECS tasks. With Fargate, the company does not need to provision, configure, or scale clusters of virtual machines to run containers. Amazon EFS is a fully managed file system that can be accessed by multiple containers concurrently. With EFS, the company does not need to provision and manage storage capacity. EFS provides a simple interface to create and configure file systems quickly and easily. The company can use the EFS volume as a persistent storage volume mounted in the containers to store the persistent data. The company can also use the EFS mount helper to simplify the mounting process. References: Amazon ECS on AWS Fargate, Using Amazon EFS file systems with Amazon ECS, Amazon EFS mount helper.

NEW QUESTION 6
- (Topic 4)
A company containerized a Windows job that runs on .NET 6 Framework under a Windows container. The company wants to run this job in the AWS Cloud. The job runs every 10 minutes. The job's runtime varies between 1 minute and 3 minutes.
Which solution will meet these requirements MOST cost-effectively?

A. Create an AWS Lambda function based on the container image of the jo
B. Configure Amazon EventBridge to invoke the function every 10 minutes.
C. Use AWS Batch to create a job that uses AWS Fargate resource
D. Configure the job scheduling to run every 10 minutes.
E. Use Amazon Elastic Container Service (Amazon ECS) on AWS Fargate to run the jo
F. Create a scheduled task based on the container image of the job to run every 10 minutes.
G. Use Amazon Elastic Container Service (Amazon ECS) on AWS Fargate to run the jo
H. Create a standalone task based on the container image of the jo
I. Use Windows task scheduler to run the job every 10 minutes.

Answer: A

Explanation:
AWS Lambda supports container images as a packaging format for functions. You can use existing container development workflows to package and deploy

Lambda functions as container images of up to 10 GB in size. You can also use familiar tools such as Docker CLI to build, test, and push your container images to Amazon Elastic Container Registry (Amazon ECR). You can then create an AWS Lambda function based on the container image of your job and configure Amazon EventBridge to invoke the function every 10 minutes using a cron expression. This solution will be cost-effective as you only pay for the compute time you consume when your function runs. References: https://docs.aws.amazon.com/lambda/latest/dg/images-create.html
https://docs.aws.amazon.com/eventbridge/latest/userguide/run-lambda-schedule.html

NEW QUESTION 7
- (Topic 4)
A company stores raw collected data in an Amazon S3 bucket. The data is used for several types of analytics on behalf of the company's customers. The type of analytics requested to determines the access pattern on the S3 objects.
The company cannot predict or control the access pattern. The company wants to reduce its S3 costs.
which solution will meet these requirements?

A. Use S3 replication to transition infrequently accessed objects to S3 Standard-Infrequent Access (S3 Standard-1A)
B. Use S3 Lifecycle rules to transition objects from S3 Standard to Standard-Infrequent Access (S3 Standard-1A).
C. Use S3 Lifecycle rules for transition objects from S3 Standard to S3 Intelligent-Tiering.
D. Use S3 Inventory to identify and transition objects that have not been accessed from S3 Standard to S3 Intelligent-Tiering.

Answer: C

Explanation:
S3 Intelligent-Tiering is a storage class that automatically reduces storage costs by moving data to the most cost-effective access tier based on access frequency. It has two access tiers: frequent access and infrequent access. Data is stored in the frequent access tier by default, and moved to the infrequent access tier after 30 consecutive days of no access. If the data is accessed again, it is moved back to the frequent access tie1r. By using S3 Lifecycle rules to transition objects from S3 Standard to S3 Intelligent-Tiering, the solution can reduce S3 costs for data with unknown or changing access patterns.
* A. Use S3 replication to transition infrequently accessed objects to S3 Standard-Infrequent Access (S3 Standard-IA). This solution will not meet the requirement of reducing S3 costs for data with unknown or changing access patterns, as S3 replication is a feature that copies objects across buckets or Regions for redundancy or compliance purposes. It does not automatically move objects to a different storage class based on access frequency2.
* B. Use S3 Lifecycle rules to transition objects from S3 Standard to Standard-Infrequent Access (S3 Standard-IA). This solution will not meet the requirement of reducing S3 costs for data with unknown or changing access patterns, as S3 Standard-IA is a storage class that offers lower storage costs than S3 Standard, but charges a retrieval fee for accessing the data. It is suitable for long-lived and infrequently accessed data, not for data with changing access patterns1.
* D. Use S3 Inventory to identify and transition objects that have not been accessed from S3 Stand-ard to S3 Intelligent-Tiering. This solution will not meet the requirement of reducing S3 costs for data with unknown or changing access patterns, as S3 Inventory is a feature that provides a report of the objects in a bucket and their metadata on a daily or weekly basis. It does not automatically move objects to a different storage class based on access frequency3.
Reference URL: https://aws.amazon.com/s3/storage-classes/intelligent-tiering/
S3 Intelligent-Tiering is the best solution for reducing S3 costs when the access pattern is unpredictable or changing. S3 Intelligent-Tiering automatically moves objects between two access tiers (frequent and infrequent) based on the access frequency, without any performance impact or retrieval fees. S3 Intelligent-Tiering also has an optional archive tier for objects that are rarely accessed. S3 Lifecycle rules can be used to transition objects from S3 Standard to S3 Intelligent-Tiering.
Reference URLs:
1 https://aws.amazon.com/s3/storage-classes/intelligent-tiering/
2 https://docs.aws.amazon.com/AmazonS3/latest/userguide/using-intelligent-tiering.html
3 https://docs.aws.amazon.com/AmazonS3/latest/userguide/intelligent-tiering- overview.html

NEW QUESTION 8
- (Topic 4)
A company needs to migrate a MySQL database from its on-premises data center to AWS within 2 weeks. The database is 20 TB in size. The company wants to complete the migration with minimal downtime.
Which solution will migrate the database MOST cost-effectively?

A. Order an AWS Snowball Edge Storage Optimized devic
B. Use AWS Database Migration Service (AWS DMS) with AWS Schema Conversion Tool (AWS SCT) to migrate the database with replication of ongoing change
C. Send the Snowball Edge device to AWS to finish the migration and continue the ongoing replication.
D. Order an AWS Snowmobile vehicl
E. Use AWS Database Migration Service (AWS DMS) with AWS Schema Conversion Tool (AWS SCT) to migrate the database wjgh ongoing change
F. Send the Snowmobile vehicle back to AWS to finish the migration and continue the ongoing replication.
G. Order an AWS Snowball Edge Compute Optimized with GPU devic
H. Use AWS Database Migration Service (AWS DMS) with AWS Schema Conversion Tool (AWS SCT) to migrate the database with ongoing change
I. Send the Snowball device to AWS to finish the migration and continue the ongoing replication.
J. Order a 1 GB dedicated AWS Direct Connect connection to establish a connection with the data cente
K. Use AWS Database Migration Service (AWS DMS) with AWS Schema Conversion Tool(AWS SCT) to migrate the database with replication of ongoing changes.

Answer: A

Explanation:
This answer is correct because it meets the requirements of migrating a 20 TB MySQL database within 2 weeks with minimal downtime and cost-effectively. The AWS Snowball Edge Storage Optimized device has up to 80 TB of usable storage space, which is enough to fit the database. The AWS Database Migration Service (AWS DMS) can migrate data from MySQL to Amazon Aurora, Amazon RDS for MySQL, or MySQL on Amazon EC2 with minimal downtime by continuously replicating changes from the source to the target. The AWS Schema Conversion Tool (AWS SCT) can convert the source schema and code to a format compatible with the target database. By using these services together, the company can migrate the database to AWS with minimal downtime and cost. The Snowball Edge device can be shipped back to AWS to finish the migration and continue the ongoing replication until the database is fully migrated.
References:
? https://docs.aws.amazon.com/snowball/latest/developer-guide/device- differences.html
? https://docs.aws.amazon.com/dms/latest/userguide/CHAP_Source.MySQL.html
? https://docs.aws.amazon.com/SchemaConversionTool/latest/userguide/CHAP_So urce.MySQL.htm

NEW QUESTION 9
- (Topic 4)
A social media company runs its application on Amazon EC2 instances behind an Application Load Balancer (ALB). The ALB is the origin for an Amazon CloudFront distribution. The application has more than a billion images stored in an Amazon S3 bucket and processes thousands of images each second. The

company wants to resize the images dynamically and serve appropriate formats to clients.
Which solution will meet these requirements with the LEAST operational overhead?

A. Install an external image management library on an EC2 instanc
B. Use the image management library to process the images.
C. Create a CloudFront origin request polic
D. Use the policy to automatically resize images and to serve the appropriate format based on the User-Agent HTTP header in the request.
E. Use a Lambda@Edge function with an external image management librar
F. Associate the Lambda@Edge function with the CloudFront behaviors that serve the images.
G. Create a CloudFront response headers polic
H. Use the policy to automatically resize images and to serve the appropriate format based on the User-Agent HTTP header in the request.

Answer: C

Explanation:
Lambda@Edge is a service that allows you to run Lambda functions at CloudFront edge locations. It can be used to modify requests and responses that flow through CloudFront. CloudFront origin request policy is a policy that controls the values (URL query strings, HTTP headers, and cookies) that are included in requests that CloudFront sends to the origin. It can be used to collect additional information at the origin or to customize the origin response. CloudFront response headers policy is a policy that specifies the HTTP headers that CloudFront removes or adds in responses that it sends to viewers. It can be used to add security or custom headers to responses.
Based on these definitions, the solution that will meet the requirements with the least operational overhead is:
* C. Use a Lambda@Edge function with an external image management library. Associate the Lambda@Edge function with the CloudFront behaviors that serve the images.
This solution would allow the application to use a Lambda@Edge function to resize the images dynamically and serve appropriate formats to clients based on the User-Agent HTTP header in the request. The Lambda@Edge function would run at the edge locations,
reducing latency and load on the origin. The application code would only need to include an external image management library that can perform image manipulation tasks1.

NEW QUESTION 10
- (Topic 4)
A financial company needs to handle highly sensitive data The company will store the data in an Amazon S3 bucket The company needs to ensure that the data is encrypted in transit and at rest The company must manage the encryption keys outside the AWS Cloud
Which solution will meet these requirements?

A. Encrypt the data in the S3 bucket with server-side encryption (SSE) that uses an AWS Key Management Service (AWS KMS) customer managed key
B. Encrypt the data in the S3 bucket with server-side encryption (SSE) that uses an AWS Key Management Service (AWS KMS) AWS managed key
C. Encrypt the data in the S3 bucket with the default server-side encryption (SSE)
D. Encrypt the data at the company's data center before storing the data in the S3 bucket

Answer: D

Explanation:
This option is the only solution that meets the requirements because it allows the company to encrypt the data with its own encryption keys and tools outside the AWS Cloud. By encrypting the data at the company's data center before storing the data in the S3 bucket, the company can ensure that the data is encrypted in transit and at rest, and that the company has full control over the encryption keys and processes. This option also avoids the need to use any AWS encryption services or features, which may not be compatible with the company's security policies or compliance standards.
* A. Encrypt the data in the S3 bucket with server-side encryption (SSE) that uses an AWS Key Management Service (AWS KMS) customer managed key. This option does not meet the requirements because it does not allow the company to manage the encryption keys outside the AWS Cloud. Although the company can create and use its own customer managed key in AWS KMS, the key is still stored and managed by AWS KMS, which is a service within the AWS Cloud. Moreover, the company still needs to use the AWS encryption features and APIs to encrypt and decrypt the data in the S3 bucket, which may not be compatible with the company's security policies or compliance standards.
* B. Encrypt the data in the S3 bucket with server-side encryption (SSE) that uses an AWS Key Management Service (AWS KMS) AWS managed key. This option does not meet the requirements because it does not allow the company to manage the encryption keys outside the AWS Cloud. In this option, the company uses the default AWS managed key in AWS KMS, which is created and managed by AWS on behalf of the company. The company has no control over the key rotation, deletion, or recovery policies. Moreover, the company still needs to use the AWS encryption features and APIs to encrypt and decrypt the data in the S3 bucket, which may not be compatible with the company's security policies or compliance standards.
* C. Encrypt the data in the S3 bucket with the default server-side encryption (SSE). This option does not meet the requirements because it does not allow the company to manage the encryption keys outside the AWS Cloud. In this option, the company uses the default server-side encryption with Amazon S3 managed keys (SSE-S3), which is applied to every bucket in Amazon S3. The company has no visibility or control over the encryption keys, which are managed by Amazon S3. Moreover, the company still needs to use the AWS encryption features and APIs to encrypt and decrypt the data in the S3 bucket, which may not be compatible with the company's security policies or compliance standards. References:
? 1 Protecting data with encryption - Amazon Simple Storage Service
? 2 Protecting data with server-side encryption - Amazon Simple Storage Service
? 3 Protecting data by using client-side encryption - Amazon Simple Storage Service
? 4 AWS Key Management Service Concepts - AWS Key Management Service

NEW QUESTION 10
- (Topic 4)
An image hosting company uploads its large assets to Amazon S3 Standard buckets The company uses multipart upload in parallel by using S3 APIs and overwrites if the same object is uploaded again. For the first 30 days after upload, the objects will be accessed frequently. The objects will be used less frequently after 30 days, but the access patterns for each object will be inconsistent The company must optimize its S3 storage costs while maintaining high availability and resiliency of stored assets.
Which combination of actions should a solutions architect recommend to meet these requirements? (Select TWO.)

A. Move assets to S3 Intelligent-Tiering after 30 days.
B. Configure an S3 Lifecycle policy to clean up incomplete multipart uploads.
C. Configure an S3 Lifecycle policy to clean up expired object delete markers.
D. Move assets to S3 Standard-Infrequent Access (S3 Standard-IA) after 30 days
E. Move assets to S3 One Zone-Infrequent Access (S3 One Zone-IA) after 30 days.

Answer: AB

Explanation:
S3 Intelligent-Tiering is a storage class that automatically moves data to the most cost-effective access tier based on access frequency, without performance impact, retrieval fees, or operational overhead1. It is ideal for data with unknown or changing access patterns, such as the company's assets. By moving assets to S3 Intelligent-Tiering after 30 days, the company can optimize its storage costs while maintaining high availability and resilience of stored assets.
S3 Lifecycle is a feature that enables you to manage your objects so that they are stored cost effectively throughout their lifecycle2. You can create lifecycle rules to define actions that Amazon S3 applies to a group of objects. One of the actions is to abort incomplete multipart uploads that can occur when an upload is interrupted. By configuring an S3 Lifecycle policy to clean up incomplete multipart uploads, the company can reduce its storage costs and avoid paying for parts that are not used.
Option C is incorrect because expired object delete markers are automatically deleted by Amazon S3 and do not incur any storage costs3. Therefore, configuring an S3 Lifecycle policy to clean up expired object delete markers will not have any effect on the company's storage costs.
Option D is incorrect because S3 Standard-IA is a storage class for data that is accessed less frequently, but requires rapid access when needed1. It has a lower storage cost than S3 Standard, but it has a higher retrieval cost and a minimum storage duration charge of 30 days. Therefore, moving assets to S3 Standard-IA after 30 days may not optimize the company's storage costs if the assets are still accessed occasionally.
Option E is incorrect because S3 One Zone-IA is a storage class for data that is accessed less frequently, but requires rapid access when needed1. It has a lower storage cost than S3 Standard-IA, but it stores data in only one Availability Zone and has less resilience than other storage classes. It also has a higher retrieval cost and a minimum storage duration charge of 30 days. Therefore, moving assets to S3 One Zone-IA after 30 days may not optimize the company's storage costs if the assets are still accessed occasionally or require high availability. Reference URL: 1: https://docs.aws.amazon.com/AmazonS3/latest/userguide/storage-class-intro.html 2:
https://docs.aws.amazon.com/AmazonS3/latest/userguide/object-lifecycle-mgmt.html 3: https://docs.aws.amazon.com/AmazonS3/latest/userguide/delete-or-empty- bucket.html#delete-bucket-considerations : https://docs.aws.amazon.com/AmazonS3/latest/userguide/mpuoverview.html :
https://aws.amazon.com/certification/certified-solutions-architect-associate/

NEW QUESTION 13
- (Topic 4)
A company has users all around the world accessing its HTTP-based application deployed on Amazon EC2 instances in multiple AWS Regions. The company wants to improve the availability and performance of the application. The company also wants to protect the application against common web exploits that may affect availability, compromise security, or consume excessive resources. Static IP addresses are required.
What should a solutions architect recommend to accomplish this?

A. Put the EC2 instances behind Network Load Balancers (NLBs) in each Regio
B. Deploy AWS WAF on the NLB
C. Create an accelerator using AWS Global Accelerator and register the NLBs as endpoints.
D. Put the EC2 instances behind Application Load Balancers (ALBs) in each Regio
E. Deploy AWS WAF on the ALB
F. Create an accelerator using AWS Global Accelerator and register the ALBs as endpoints.
G. Put the EC2 instances behind Network Load Balancers (NLBs) in each Regio
H. Deploy AWS WAF on the NLB
I. Create an Amazon CloudFront distribution with an origin that uses Amazon Route 53 latency-based routing to route requests to the NLBs.
J. Put the EC2 instances behind Application Load Balancers (ALBs) in each Regio
K. Create an Amazon CloudFront distribution with an origin that uses Amazon Route 53 latency-based routing to route requests to the ALB
L. Deploy AWS WAF on the CloudFront distribution.

Answer: A

Explanation:
The company wants to improve the availability and performance of the application, as well as protect it against common web exploits. The company also needs static IP addresses for the application. To meet these requirements, a solutions architect should recommend the following solution:
? Put the EC2 instances behind Network Load Balancers (NLBs) in each Region.
NLBs are designed to handle millions of requests per second while maintaining high throughput at ultra-low latency. NLBs also support static IP addresses for each Availability Zone, which can be useful for whitelisting or firewalling purposes.
? Deploy AWS WAF on the NLBs. AWS WAF is a web application firewall that helps
protect web applications from common web exploits that could affect availability, security, or performance. AWS WAF lets you define customizable web security rules that control which traffic to allow or block to your web applications.
? Create an accelerator using AWS Global Accelerator and register the NLBs as
endpoints. AWS Global Accelerator is a service that improves the availability and performance of your applications with local or global users. It provides static IP addresses that act as a fixed entry point to your application endpoints in any AWS Region. It uses the AWS global network to optimize the path from your users to your applications, improving the performance of your TCP and UDP traffic.
This solution will provide high availability across Availability Zones and Regions, improve performance by routing traffic over the AWS global network, protect the application from common web attacks, and provide static IP addresses for the application.
References:
? Network Load Balancer
? AWS WAF
? AWS Global Accelerator

NEW QUESTION 14
- (Topic 4)
A company wants to securely exchange data between its software as a service (SaaS) application Salesforce account and Amazon S3. The company must encrypt the data at rest by using AWS Key Management Service (AWS KMS) customer managed keys (CMKs). The company must also encrypt the data in transit. The company has enabled API access for the Salesforce account.
Which solution will meet these requirements with the LEAST development effort?

A. Create AWS Lambda functions to transfer the data securely from Salesforce to Amazon S3.
B. Create an AWS Step Functions workflow Define the task to transfer the data securely from Salesforce to Amazon S3.
C. Create Amazon AppFlow flows to transfer the data securely from Salesforce to Amazon S3.
D. Create a custom connector for Salesforce to transfer the data securely from Salesforce to Amazon S3.

Answer: C

Explanation:
Amazon AppFlow is a fully managed integration service that enables users to transfer data securely between SaaS applications and AWS services. It supports Salesforce as a source and Amazon S3 as a destination. It also supports encryption of data at rest using AWS KMS CMKs and encryption of data in transit using

SSL/TLS1. By using Amazon AppFlow, the solution can meet the requirements with the least development effort.
* A. Create AWS Lambda functions to transfer the data securely from Salesforce to Amazon S3. This solution will not meet the requirement of the least development effort, as it involves writing custom code to interact with Salesforce and Amazon S3 APIs, handle authentication, encryption, error handling, and monitoring2.
* B. Create an AWS Step Functions workflow Define the task to transfer the data securely from Salesforce to Amazon S3. This solution will not meet the requirement of the least development effort, as it involves creating a state machine definition to orchestrate the data transfer task, and invoking Lambda functions or other services to perform the actual data transfer3.
* D. Create a custom connector for Salesforce to transfer the data securely from Salesforce to Ama-zon S3. This solution will not meet the requirement of the least development effort, as it involves using the Amazon AppFlow Custom Connector SDK to build and deploy a custom connector for Salesforce, which requires additional configuration and management. Reference URL: https://aws.amazon.com/appflow/

NEW QUESTION 16
- (Topic 4)
A company has an organization in AWS Organizations that has all features enabled The company requires that all API calls and logins in any existing or new AWS account must be audited The company needs a managed solution to prevent additional work and to minimize costs The company also needs to know when any AWS account is not compliant with the AWS Foundational Security Best Practices (FSBP) standard.
Which solution will meet these requirements with the LEAST operational overhead?

A. Deploy an AWS Control Tower environment in the Organizations management account Enable AWS Security Hub and AWS Control Tower Account Factory in the environment.
B. Deploy an AWS Control Tower environment in a dedicated Organizations member account Enable AWS Security Hub and AWS Control Tower Account Factory in the environment.
C. Use AWS Managed Services (AMS) Accelerate to build a multi-account landing zone (MALZ) Submit an RFC to self-service provision Amazon GuardDuty in the MALZ.
D. Use AWS Managed Services (AMS) Accelerate to build a multi-account landing zone (MALZ) Submit an RFC to self-service provision AWS Security Hub in the MALZ.

Answer: A

Explanation:
AWS Control Tower is a fully managed service that simplifies the setup and governance of a secure, compliant, multi-account AWS environment. It establishes a landing zone that is based on best-practices blueprints, and it enables governance using controls you can choose from a pre-packaged list. The landing zone is a well-architected, multi-account baseline that follows AWS best practices. Controls implement governance rules for security, compliance, and operations. AWS Security Hub is a service that provides a comprehensive view of your security posture across your AWS accounts. It aggregates, organizes, and prioritizes security alerts and findings from multiple AWS services, such as Amazon GuardDuty, Amazon Inspector, Amazon Macie, AWS Firewall Manager, and AWS IAM Access Analyzer, as well as from AWS Partner solutions. AWS Security Hub continuously monitors your environment using automated compliance checks based on the AWS best practices and industry standards, such as the AWS Foundational Security Best Practices (FSBP) standard. AWS Control Tower Account Factory is a feature that automates the provisioning of new AWS accounts that are preconfigured to meet your business, security, and compliance requirements. By deploying an AWS Control Tower environment in the Organizations management account, you can leverage the existing organization structure and policies, and enable AWS Security Hub and AWS Control Tower Account Factory in the environment. This way, you can audit all API calls and logins in any existing or new AWS account, monitor the compliance status of each account with the FSBP standard, and provision new accounts with ease and consistency. This solution meets the requirements with the least operational overhead, as you do not need to manage any infrastructure, perform any data migration, or submit any requests for changes. References:
? AWS Control Tower
? [AWS Security Hub]
? [AWS Control Tower Account Factory]

NEW QUESTION 18
- (Topic 4)
A manufacturing company runs its report generation application on AWS. The application generates each report in about 20 minutes. The application is built as a monolith that runs on a single Amazon EC2 instance. The application requires frequent updates to its tightly coupled modules. The application becomes complex to maintain as the company adds new features.
Each time the company patches a software module, the application experiences downtime. Report generation must restart from the beginning after any interruptions. The company wants to redesign the application so that the application can be flexible, scalable, and gradually improved. The company wants to minimize application downtime.
Which solution will meet these requirements?

A. Run the application on AWS Lambda as a single function with maximum provisioned concurrency.
B. Run the application on Amazon EC2 Spot Instances as microservices with a Spot Fleet default allocation strategy.
C. Run the application on Amazon Elastic Container Service (Amazon ECS) as microservices with service auto scaling.
D. Run the application on AWS Elastic Beanstalk as a single application environment with an all-at-once deployment strategy.

Answer: C

Explanation:
The solution that will meet the requirements is to run the application on Amazon Elastic Container Service (Amazon ECS) as microservices with service auto scaling. This solution will allow the application to be flexible, scalable, and gradually improved, as well as minimize application downtime. By breaking down the monolithic application into microservices, the company can decouple the modules and update them independently, without affecting the whole application. By running the microservices on Amazon ECS, the company can leverage the benefits of containerization, such as portability, efficiency, and isolation. By enabling service auto scaling, the company can adjust the number of containers running for each microservice based on demand, ensuring optimal performance and cost. Amazon ECS also supports various deployment strategies, such as rolling update or blue/green deployment, that can reduce or eliminate downtime during updates.
The other solutions are not as effective as the first one because they either do not meet the requirements or introduce new challenges. Running the application on AWS Lambda as a single function with maximum provisioned concurrency will not meet the requirements, as it will not break down the monolith into microservices, nor will it reduce the complexity of maintenance. Lambda functions are also limited by execution time (15 minutes), memory size (10 GB), and concurrency quotas, which may not be sufficient for the report generation application. Running the application on Amazon EC2 Spot Instances as microservices with a Spot Fleet default allocation strategy will not meet the requirements, as it will introduce the risk of interruptions due to spot price fluctuations. Spot Instances are not guaranteed to be available or stable, and may be reclaimed by AWS at any time with a two-minute warning. This may cause report generation to fail or restart from scratch. Running the application on AWS Elastic Beanstalk as a single application environment with an all-at- once deployment strategy will not meet the requirements, as it will not break down the monolith into microservices, nor will it minimize application downtime. The all-at-once deployment strategy will deploy updates to all instances simultaneously, causing a brief outage for the application.

References:
? Amazon Elastic Container Service
? Microservices on AWS
? Service Auto Scaling - Amazon Elastic Container Service
? AWS Lambda
? Amazon EC2 Spot Instances
? [AWS Elastic Beanstalk]

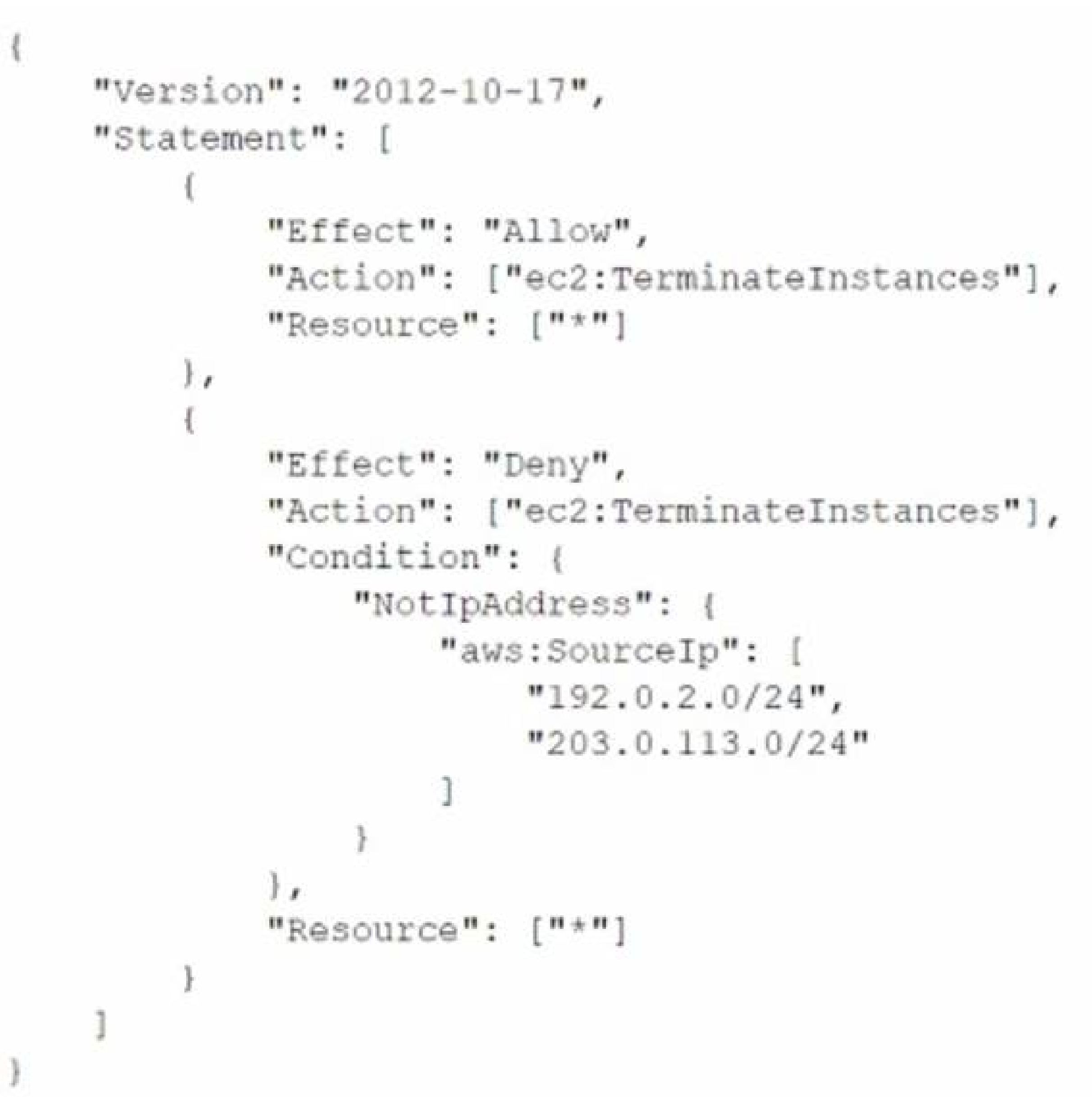
NEW QUESTION 22
- (Topic 4)
A company runs a highly available SFTP service. The SFTP service uses two Amazon EC2
Linux instances that run with elastic IP addresses to accept traffic from trusted IP sources on the internet. The SFTP service is backed by shared storage that is attached to the instances. User accounts are created and managed as Linux users in the SFTP servers.
The company wants a serverless option that provides high IOPS performance and highly configurable security. The company also wants to maintain control over user permissions.
Which solution will meet these requirements?

A. Create an encrypted Amazon Elastic Block Store (Amazon EBS) volum
B. Create an AWS Transfer Family SFTP service with a public endpoint that allows only trusted IP addresse
C. Attach the EBS volume to the SFTP service endpoin
D. Grant users access to the SFTP service.
E. Create an encrypted Amazon Elastic File System (Amazon EFS) volum
F. Create an AWS Transfer Family SFTP service with elastic IP addresses and a VPC endpoint that has internet-facing acces
G. Attach a security group to the endpoint that allows only trusted IP addresse
H. Attach the EFS volume to the SFTP service endpoin
I. Grant users access to the SFTP service.
J. Create an Amazon S3 bucket with default encryption enable
K. Create an AWS Transfer Family SFTP service with a public endpoint that allows only trusted IP addresse
L. Attach the S3 bucket to the SFTP service endpoin
M. Grant users access to the SFTP service.
N. Create an Amazon S3 bucket with default encryption enable
O. Create an AWS Transfer Family SFTP service with a VPC endpoint that has internal access in a private subne
P. Attach a security group that allows only trusted IP addresse
Q. Attach the S3 bucket to the SFTP service endpoin
R. Grant users access to the SFTP service.

Answer: C

Explanation:
AWS Transfer Family is a secure transfer service that enables you to transfer files into and out of AWS storage services using SFTP, FTPS, FTP, and AS2 protocols. You can use AWS Transfer Family to create an SFTP-enabled server with a public endpoint that allows only trusted IP addresses. You can also attach an Amazon S3 bucket with default encryption enabled to the SFTP service endpoint, which will provide high IOPS performance and highly configurable security for your data at rest. You can also maintain control over user permissions by granting users access to the SFTP service using IAM roles or service-managed identities. References: https://docs.aws.amazon.com/transfer/latest/userguide/what-is-aws-transfer-family.html
https://docs.aws.amazon.com/transfer/latest/userguide/create-server-s3.html

NEW QUESTION 26
- (Topic 4)
A company uses Amazon EC2 instances to host its internal systems. As part of a deployment operation, an administrator tries to use the AWS CLI to terminate an EC2 instance. However, the administrator receives a 403 (Access Denied) error message.
The administrator is using an IAM role that has the following IAM policy attached:



```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": ["ec2:TerminateInstances"],
            "Resource": ["*"]
        },
        {
            "Effect": "Deny",
            "Action": ["ec2:TerminateInstances"],
            "Condition": {
                "NotIpAddress": {
                    "aws:SourceIp": [
                        "192.0.2.0/24",
                        "203.0.113.0/24"
                    ]
                }
            },
            "Resource": ["*"]
        }
    ]
}
```

What is the cause of the unsuccessful request?

A. The EC2 instance has a resource-based policy with a Deny statement.
B. The principal has not been specified in the policy statement
C. The "Action" field does not grant the actions that are required to terminate the EC2 instance.
D. The request to terminate the EC2 instance does not originate from the CIDR blocks 192.0.2.0/24 or 203.0 113.0/24

Answer: D

NEW QUESTION 30
- (Topic 4)
A solutions architect is implementing a document review application using an Amazon S3 bucket for storage. The solution must prevent accidental deletion of the documents and ensure that all versions of the documents are available. Users must be able to download, modify, and upload documents.
Which combination of actions should be taken to meet these requirements? (Choose two.)

A. Enable a read-only bucket ACL.
B. Enable versioning on the bucket.
C. Attach an IAM policy to the bucket.
D. Enable MFA Delete on the bucket.
E. Encrypt the bucket using AWS KMS.

Answer: BD

Explanation:
Versioning is a feature of Amazon S3 that allows users to keep multiple versions of the same object in a bucket. It can help prevent accidental deletion of the documents and ensure that all versions of the documents are available1. MFA Delete is a feature of Amazon S3 that adds an extra layer of security by requiring two forms of authentication to delete a version or change the versioning state of a bucket. It can help prevent unauthorized or accidental deletion of the documents2. By enabling both versioning and MFA Delete on the bucket, the solution can meet the requirements.
* A. Enable a read-only bucket ACL. This solution will not meet the requirement of allowing
users to download, modify, and upload documents, as a read-only bucket ACL will prevent write access to the bucket3.
* C. Attach an IAM policy to the bucket. This solution will not meet the requirement of preventing accidental deletion of the documents and ensuring that all versions of the documents are available, as an IAM policy is used to grant or deny permissions to users or roles, not to enable versioning or MFA Delete4.
* E. Encrypt the bucket using AWS KMS. This solution will not meet the requirement of preventing accidental deletion of the documents and ensuring that all versions of the documents are available, as encrypting the bucket using AWS KMS is a method of protecting data at rest, not enabling versioning or MFA Delete.
Reference URL: https://docs.aws.amazon.com/AmazonS3/latest/userguide/Versioning.html

NEW QUESTION 32
- (Topic 4)
A recent analysis of a company's IT expenses highlights the need to reduce backup costs. The company's chief information officer wants to simplify the on-premises backup infrastructure and reduce costs by eliminating the use of physical backup tapes. The company must preserve the existing investment in the on-premises backup applications and workflows.
What should a solutions architect recommend?

A. Set up AWS Storage Gateway to connect with the backup applications using the NFS interface.
B. Set up an Amazon EFS file system that connects with the backup applications using the NFS interface.
C. Set up an Amazon EFS file system that connects with the backup applications using the iSCSI interface.

D. Set up AWS Storage Gateway to connect with the backup applications using the iSCSI- virtual tape library (VTL) interface.

Answer: D

Explanation:
it allows the company to simplify the on-premises backup infrastructure and reduce costs by eliminating the use of physical backup tapes. By setting up AWS Storage Gateway to connect with the backup applications using the iSCSI-virtual tape library (VTL) interface, the company can store backup data on virtual tapes in S3 or Glacier. This preserves the existing investment in the on-premises backup applications and workflows while leveraging AWS storage services.
References:
? AWS Storage Gateway
? Tape Gateway

NEW QUESTION 36
- (Topic 4)
A company runs an SMB file server in its data center. The file server stores large files that the company frequently accesses for up to 7 days after the file creation date. After 7 days, the company needs to be able to access the files with a maximum retrieval time of 24 hours.
Which solution will meet these requirements?

A. Use AWS DataSync to copy data that is older than 7 days from the SMB file server to AWS.
B. Create an Amazon S3 File Gateway to increase the company's storage spac
C. Create an S3 Lifecycle policy to transition the data to S3 Glacier Deep Archive after 7 days.
D. Create an Amazon FSx File Gateway to increase the company's storage spac
E. Create an Amazon S3 Lifecycle policy to transition the data after 7 days.
F. Configure access to Amazon S3 for each use
G. Create an S3 Lifecycle policy to transition the data to S3 Glacier Flexible Retrieval after 7 days.

Answer: B

Explanation:
Amazon S3 File Gateway is a service that provides a file-based interface to Amazon S3, which appears as a network file share. It enables you to store and retrieve Amazon S3 objects through standard file storage protocols such as SMB. S3 File Gateway can also cache frequently accessed data locally for low-latency access. S3 Lifecycle policy is a feature that allows you to define rules that automate the management of your objects throughout their lifecycle. You can use S3 Lifecycle policy to transition objects to different storage classes based on their age and access patterns. S3 Glacier Deep Archive is a storage class that offers the lowest cost for long-term data archiving, with a retrieval time of 12 hours or 48 hours. This solution will meet the requirements, as it allows the company to store large files in S3 with SMB file access, and to move the files to S3 Glacier Deep Archive after 7 days for cost savings and compliance.
References:
? 1 provides an overview of Amazon S3 File Gateway and its benefits.
? 2 explains how to use S3 Lifecycle policy to manage object storage lifecycle.
? 3 describes the features and use cases of S3 Glacier Deep Archive storage class.

NEW QUESTION 39
- (Topic 4)
A company is deploying an application that processes large quantities of data in parallel. The company plans to use Amazon EC2 instances for the workload. The network architecture must be configurable to prevent groups of nodes from sharing the same underlying hardware.
Which networking solution meets these requirements?

A. Run the EC2 instances in a spread placement group.
B. Group the EC2 instances in separate accounts.
C. Configure the EC2 instances with dedicated tenancy.
D. Configure the EC2 instances with shared tenancy.

Answer: A

Explanation:
it allows the company to deploy an application that processes large quantities of data in parallel and prevent groups of nodes from sharing the same underlying hardware. By running the EC2 instances in a spread placement group, the company can launch a small number of instances across distinct underlying hardware to reduce correlated failures. A spread placement group ensures that each instance is isolated from each other at the rack level. References:
? Placement Groups
? Spread Placement Groups

NEW QUESTION 42
- (Topic 4)
A company is building an Amazon Elastic Kubernetes Service (Amazon EKS) cluster for its workloads. All secrets that are stored in Amazon EKS must be encrypted in the Kubernetes etcd key-value store.
Which solution will meet these requirements?

A. Create a new AWS Key Management Service (AWS KMS) key Use AWS Secrets Manager to manage rotate, and store all secrets in Amazon EKS.
B. Create a new AWS Key Management Service (AWS KMS) key Enable Amazon EKS KMS secrets encryption on the Amazon EKS cluster.
C. Create the Amazon EKS cluster with default options Use the Amazon Elastic Block Store (Amazon EBS) Container Storage Interface (CSI) driver as an add-on.
D. Create a new AWS Key Management Service (AWS KMS) key with the ahas/aws/ebs alias Enable default Amazon Elastic Block Store (Amazon EBS) volume encryption for the account.

Answer: B

Explanation:
This option is the most secure and simple way to encrypt the secrets that are stored in Amazon EKS. AWS Key Management Service (AWS KMS) is a service that allows you to create and manage encryption keys that can be used to encrypt your data. Amazon EKS KMS secrets encryption is a feature that enables you to use a KMS key to encrypt the secrets that are stored in the Kubernetes etcd key-value store. This provides an additional layer of protection for your sensitive data, such as passwords, tokens, and keys. You can create a new KMS key or use an existing one, and then enable the Amazon EKS KMS secrets encryption on the Amazon EKS cluster. You can also use IAM policies to control who can access or use the KMS key.

Option A is not correct because using AWS Secrets Manager to manage, rotate, and store all secrets in Amazon EKS is not necessary or efficient. AWS Secrets Manager is a service that helps you securely store, retrieve, and rotate your secrets, such as database credentials, API keys, and passwords. You can use it to manage secrets that are used by your applications or services outside of Amazon EKS, but it is not designed to encrypt the secrets that are stored in the Kubernetes etcd key-value store. Moreover, using AWS Secrets Manager would incur additional costs and complexity, and it would not leverage the native Kubernetes secrets management capabilities.
Option C is not correct because using the Amazon EBS Container Storage Interface (CSI) driver as an add-on does not encrypt the secrets that are stored in Amazon EKS. The Amazon EBS CSI driver is a plugin that allows you to use Amazon EBS volumes as persistent storage for your Kubernetes pods. It is useful for providing durable and scalable storage for your applications, but it does not affect the encryption of the secrets that are stored in the Kubernetes etcd key-value store. Moreover, using the Amazon EBS CSI driver would require additional configuration and resources, and it would not provide the same level of security as using a KMS key.
Option D is not correct because creating a new AWS KMS key with the alias aws/ebs and enabling default Amazon EBS volume encryption for the account does not encrypt the secrets that are stored in Amazon EKS. The alias aws/ebs is a reserved alias that is used by AWS to create a default KMS key for your account. This key is used to encrypt the Amazon EBS volumes that are created in your account, unless you specify a different KMS key. Enabling default Amazon EBS volume encryption for the account is a setting that ensures that all new Amazon EBS volumes are encrypted by default. However, these features do not affect the encryption of the secrets that are stored in the Kubernetes etcd key-value store. Moreover, using the default KMS key or the default encryption setting would not provide the same level of control and security as using a custom KMS key and enabling the Amazon EKS KMS secrets encryption feature. References:
? Encrypting secrets used in Amazon EKS
? What Is AWS Key Management Service?
? What Is AWS Secrets Manager?
? Amazon EBS CSI driver
? Encryption at rest

NEW QUESTION 45
- (Topic 4)
A company stores multiple Amazon Machine Images (AMIs) in an AWS account to launch its Amazon EC2 instances. The AMIs contain critical data and configurations that are necessary for the company's operations. The company wants to implement a solution that will recover accidentally deleted AMIs quickly and efficiently.
Which solution will meet these requirements with the LEAST operational overhead?

A. Create Amazon Elastic Block Store (Amazon EBS) snapshots of the AMI
B. Store the snapshots in a separate AWS account.
C. Copy all AMIs to another AWS account periodically.
D. Create a retention rule in Recycle Bin.
E. Upload the AMIs to an Amazon S3 bucket that has Cross-Region Replication.

Answer: C

Explanation:
Recycle Bin is a data recovery feature that enables you to restore accidentally deleted Amazon EBS snapshots and EBS-backed AMIs. When using Recycle Bin, if your resources are deleted, they are retained in the Recycle Bin for a time period that you specify before being permanently deleted. You can restore a resource from the Recycle Bin at any time before its retention period expires. This solution has the least operational overhead, as you do not need to create, copy, or upload any additional resources. You can also manage tags and permissions for AMIs in the Recycle Bin. AMIs in the Recycle Bin do not incur any additional charges.
References:
? Recover AMIs from the Recycle Bin
? Recover an accidentally deleted Linux AMI

NEW QUESTION 50
- (Topic 4)
A company needs to create an AWS Lambda function that will run in a VPC in the company's primary AWS account. The Lambda function needs to access files that the company stores in an Amazon Elastic File System (Amazon EFS) file system. The EFS file system is located in a secondary AWS account. As the company adds files to the file system the solution must scale to meet the demand.
Which solution will meet these requirements MOST cost-effectively?

A. Create a new EPS file system in the primary account Use AWS DataSync to copy the contents of the original EPS file system to the new EPS file system
B. Create a VPC peering connection between the VPCs that are in the primary account and the secondary account
C. Create a second Lambda function In the secondary account that has a mount that is configured for the file syste
D. Use the primary account's Lambda function to invoke the secondary account's Lambda function
E. Move the contents of the file system to a Lambda Layer’s Configure the Lambda layer's permissions to allow the company's secondary account to use the Lambda layer.

Answer: B

Explanation:
This option is the most cost-effective and scalable way to allow the Lambda function in the primary account to access the EFS file system in the secondary account. VPC peering enables private connectivity between two VPCs without requiring gateways, VPN connections, or dedicated network connections. The Lambda function can use the VPC peering connection to mount the EFS file system as a local file system and access the files as needed. The solution does not incur additional data transfer or storage costs, and it leverages the existing EFS file system without duplicating or moving the data.
Option A is not cost-effective because it requires creating a new EFS file system and using AWS DataSync to copy the data from the original EFS file system. This would incur additional storage and data transfer costs, and it would not provide real-time access to the files.
Option C is not scalable because it requires creating a second Lambda function in the secondary account and configuring cross-account permissions to invoke it from the primary account. This would add complexity and latency to the solution, and it would increase the Lambda invocation costs.
Option D is not feasible because Lambda layers are not designed to store large amounts of data or provide file system access. Lambda layers are used to share common code or libraries across multiple Lambda functions. Moving the contents of the EFS file system to a Lambda layer would exceed the size limit of 250 MB for a layer, and it would not allow the Lambda function to read or write files to the layer. References:
? What Is VPC Peering?
? Using Amazon EFS file systems with AWS Lambda
? What Are Lambda Layers?

NEW QUESTION 52

- (Topic 4)
A company operates a two-tier application for image processing. The application uses two Availability Zones, each with one public subnet and one private subnet. An Application Load Balancer (ALB) for the web tier uses the public subnets. Amazon EC2 instances for the application tier use the private subnets.
Users report that the application is running more slowly than expected. A security audit of the web server log files shows that the application is receiving millions of illegitimate requests from a small number of IP addresses. A solutions architect needs to resolve the immediate performance problem while the company investigates a more permanent solution.
What should the solutions architect recommend to meet this requirement?

A. Modify the inbound security group for the web tie
B. Add a deny rule for the IP addresses that are consuming resources.
C. Modify the network ACL for the web tier subnet
D. Add an inbound deny rule for the IP addresses that are consuming resources
E. Modify the inbound security group for the application tie
F. Add a deny rule for the IP addresses that are consuming resources.
G. Modify the network ACL for the application tier subnet
H. Add an inbound deny rule for the IP addresses that are consuming resources

Answer: B

Explanation:
Deny the request from the first entry at the public subnet, dont allow it to cross and get to the private subnet.
In this scenario, the security audit reveals that the application is receiving millions of illegitimate requests from a small number of IP addresses. To address this issue, it is recommended to modify the network ACL (Access Control List) for the web tier subnets. By adding an inbound deny rule specifically targeting the IP addresses that are consuming resources, the network ACL can block the illegitimate traffic at the subnet level before it reaches the web servers. This will help alleviate the excessive load on the web tier and improve the application's performance.

NEW QUESTION 54
- (Topic 4)
A company runs a web application that is deployed on Amazon EC2 instances in the private subnet of a VPC. An Application Load Balancer (ALB) that extends across the public subnets directs web traffic to the EC2 instances. The company wants to implement new security measures to restrict inbound traffic from the ALB to the EC2 instances while preventing access from any other source inside or outside the private subnet of the EC2 instances.
Which solution will meet these requirements?

A. Configure a route in a route table to direct traffic from the internet to the private IP addresses of the EC2 instances.
B. Configure the security group for the EC2 instances to only allow traffic that comes from the security group for the ALB.
C. Move the EC2 instances into the public subne
D. Give the EC2 instances a set of Elastic IP addresses.
E. Configure the security group for the ALB to allow any TCP traffic on any port.

Answer: B

Explanation:
To restrict inbound traffic from the ALB to the EC2 instances, the security group for the EC2 instances should only allow traffic that comes from the security group for the ALB. This way, the EC2 instances can only receive requests from the ALB and not from any other source inside or outside the private subnet.
References:
? Security Groups for Your Application Load Balancers
? Security Groups for Your VPC

NEW QUESTION 59
- (Topic 4)
A company runs an infrastructure monitoring service. The company is building a new feature that will enable the service to monitor data in customer AWS accounts. The new feature will call AWS APIs in customer accounts to describe Amazon EC2 instances and read Amazon CloudWatch metrics.
What should the company do to obtain access to customer accounts in the MOST secure way?

A. Ensure that the customers create an 1AM role in their account with read-only EC2 and CloudWatch permissions and a trust policy to the company's account.
B. Create a serverless API that implements a token vending machine to provide temporary AWS credentials for a role with read-only EC2 and CloudWatch permissions.
C. Ensure that the customers create an 1AM user in their account with read-only EC2 and CloudWatch permission
D. Encrypt and store customer access and secret keys in a secrets management system.
E. Ensure that the customers create an Amazon Cognito user in their account to use an 1AM role with read-only EC2 and CloudWatch permission
F. Encrypt and store the Amazon Cognito user and password in a secrets management system.

Answer: A

Explanation:
By having customers create an IAM role with the necessary permissions in their own accounts, the company can use AWS Identity and Access Management (IAM) to establish cross-account access. The trust policy allows the company's AWS account to assume the customer's IAM role temporarily, granting access to the specified resources (EC2 instances and CloudWatch metrics) within the customer's account. This approach follows the principle of least privilege, as the company only requests the necessary permissions and does not require long-term access keys or user credentials from the customers.

NEW QUESTION 61
- (Topic 4)
A company runs demonstration environments for its customers on Amazon EC2 instances. Each environment is isolated in its own VPC. The company's operations team needs to be notified when RDP or SSH access to an environment has been established.

A. Configure Amazon CloudWatch Application Insights to create AWS Systems Manager OpsItems when RDP or SSH access is detected.
B. Configure the EC2 instances with an IAM instance profile that has an IAM role with the AmazonSSMManagedInstanceCore policy attached.
C. Publish VPC flow logs to Amazon CloudWatch Log
D. Create required metric filter
E. Create an Amazon CloudWatch metric alarm with a notification action for when the alarm is in the ALARM state.

F. Configure an Amazon EventBridge rule to listen for events of type EC2 Instance State- change Notificatio
G. Configure an Amazon Simple Notification Service (Amazon SNS) topic as a targe
H. Subscribe the operations team to the topic.

Answer: C

Explanation:
https://aws.amazon.com/blogs/security/how-to-monitor-and-visualize-failed- ssh-access-attempts-to-amazon-ec2-linux-instances/

NEW QUESTION 64
- (Topic 4)
A company is concerned that two NAT instances in use will no longer be able to support the traffic needed for the company's application. A solutions architect wants to implement a solution that is highly available, fault tolerant, and automatically scalable.
What should the solutions architect recommend?

A. Remove the two NAT instances and replace them with two NAT gateways in the same Availability Zone.
B. Use Auto Scaling groups with Network Load Balancers for the NAT instances in differentAvailability Zones.
C. Remove the two NAT instances and replace them with two NAT gateways in different Availability Zones.
D. Replace the two NAT instances with Spot Instances in different Availability Zones and deploy a Network Load Balancer.

Answer: C

Explanation:
If you have resources in multiple Availability Zones and they share one NAT gateway, and if the NAT gateway's Availability Zone is down, resources in the other Availability Zones lose internet access. To create an Availability Zone-independent architecture, create a NAT gateway in each Availability Zone and configure your routing to ensure that resources use the NAT gateway in the same Availability Zone. https://docs.aws.amazon.com/vpc/latest/userguide/vpc-nat-gateway.html#nat-gateway- basics

NEW QUESTION 68
- (Topic 4)
A retail company uses a regional Amazon API Gateway API for its public REST APIs. The API Gateway endpoint is a custom domain name that points to an Amazon Route 53 alias record. A solutions architect needs to create a solution that has minimal effects on customers and minimal data loss to release the new version of APIs.
Which solution will meet these requirements?

A. Create a canary release deployment stage for API Gatewa
B. Deploy the latest API versio
C. Point an appropriate percentage of traffic to the canary stag
D. After API verification, promote the canary stage to the production stage.
E. Create a new API Gateway endpoint with a new version of the API in OpenAPI YAMLfile forma
F. Use the import-to-update operation in merge mode into the API in API Gatewa
G. Deploy the new version of the API to the production stage.
H. Create a new API Gateway endpoint with a new version of the API in OpenAPI JSON file forma
I. Use the import-to-update operation in overwrite mode into the API in API Gatewa
J. Deploy the new version of the API to the production stage.
K. Create a new API Gateway endpoint with new versions of the API definition
L. Create a custom domain name for the new API Gateway AP
M. Point the Route 53 alias record to the new API Gateway API custom domain name.

Answer: A

Explanation:
This answer is correct because it meets the requirements of releasing the new version of APIs with minimal effects on customers and minimal data loss. A canary release deployment is a software development strategy in which a new version of an API is deployed for testing purposes, and the base version remains deployed as a production release for normal operations on the same stage. In a canary release deployment, total API traffic is separated at random into a production release and a canary release with a pre- configured ratio. Typically, the canary release receives a small percentage of API traffic and the production release takes up the rest. The updated API features are only visible to API traffic through the canary. You can adjust the canary traffic percentage to optimize test coverage or performance. By keeping canary traffic small and the selection random, most users are not adversely affected at any time by potential bugs in the new version, and no single user is adversely affected all the time. After the test metrics pass your requirements, you can promote the canary release to the production release and disable the canary from the deployment. This makes the new features available in the production stage. References:
? https://docs.aws.amazon.com/apigateway/latest/developerguide/canary-release.html

NEW QUESTION 73
- (Topic 4)
A solutions architect is designing a REST API in Amazon API Gateway for a cash payback service The application requires 1 GB of memory and 2 GB of storage for its computation resources. The application will require that the data is in a relational format.
Which additional combination of AWS services will meet these requirements with the LEAST administrative effort? {Select TWO.)

A. Amazon EC2
B. AWS Lambda
C. Amazon RDS
D. Amazon DynamoDB
E. Amazon Elastic Kubernetes Services (Amazon EKS)

Answer: BC

Explanation:
AWS Lambda is a service that lets users run code without provisioning or managing servers. It automatically scales and manages the underlying compute resources for the code. It supports multiple languages, such as Java, Python, Node.js, and G1o. By using AWS Lambda for the REST API, the solution can meet the requirements of 1 GB of memory and minimal administrative effort.

Amazon RDS is a service that makes it easy to set up, operate, and scale a relational database in the cloud. It provides cost-efficient and resizable capacity while automating time-consuming administration tasks such as hardware provisioning, database setup, patching and backups. It supports multiple database engines, such as MySQL, PostgreSQL, Oracle, and SQL Server2. By using Amazon RDS for the data store, the solution can meet the requirements of 2 GB of storage and a relational format.
* A. Amazon EC2. This solution will not meet the requirement of minimal administrative effort, as Amazon EC2 is a service that provides virtual servers in the cloud that users have to configure and manage themselves. It requires users to choose an instance type, an operating system, a security group, and other options3.
* D. Amazon DynamoDB. This solution will not meet the requirement of a relational format, as Amazon DynamoDB is a service that provides a key-value and document database that delivers single-digit millisecond performance at any scale. It is a non-relational or NoSQL database that does not support joins or transactions.
* E. Amazon Elastic Kubernetes Services (Amazon EKS). This solution will not meet the requirement of minimal administrative effort, as Amazon EKS is a service that provides a fully managed Kubernetes service that users have to configure and manage themselves. It requires users to create clusters, nodes groups, pods, services, and other Kubernetes resources.
Reference URL: https://aws.amazon.com/lambda/

NEW QUESTION 78
- (Topic 4)
A company built an application with Docker containers and needs to run the application in the AWS Cloud The company wants to use a managed sen/ice to host the application
The solution must scale in and out appropriately according to demand on the individual container services The solution also must not result in additional operational overhead or infrastructure to manage
Which solutions will meet these requirements? (Select TWO)

A. Use Amazon Elastic Container Service (Amazon ECS) with AWS Fargate.
B. Use Amazon Elastic Kubernetes Service (Amazon EKS) with AWS Fargate.
C. Provision an Amazon API Gateway API Connect the API to AWS Lambda to run thecontainers.
D. Use Amazon Elastic Container Service (Amazon ECS) with Amazon EC2 worker nodes.
E. Use Amazon Elastic Kubernetes Service (Amazon EKS) with Amazon EC2 worker nodes.

Answer: AB

Explanation:
These options are the best solutions because they allow the company to run the application with Docker containers in the AWS Cloud using a managed service that scales automatically and does not require any infrastructure to manage. By using AWS Fargate, the company can launch and run containers without having to provision, configure, or scale clusters of EC2 instances. Fargate allocates the right amount of compute resources for each container and scales them up or down as needed. By using Amazon ECS or Amazon EKS, the company can choose the container orchestration platform that suits its needs. Amazon ECS is a fully managed service that integrates with other AWS services and simplifies the deployment and management of containers. Amazon EKS is a managed service that runs Kubernetes on AWS and provides compatibility with existing Kubernetes tools and plugins.
* C. Provision an Amazon API Gateway API Connect the API to AWS Lambda to run the containers. This option is not feasible because AWS Lambda does not support running Docker containers directly. Lambda functions are executed in a sandboxed environment that is isolated from other functions and resources. To run Docker containers on Lambda, the company would need to use a custom runtime or a wrapper library that emulates the Docker API, which can introduce additional complexity and overhead.
* D. Use Amazon Elastic Container Service (Amazon ECS) with Amazon EC2 worker nodes. This option is not optimal because it requires the company to manage the EC2 instances that host the containers. The company would need to provision, configure, scale, patch, and monitor the EC2 instances, which can increase the operational overhead and infrastructure costs.
* E. Use Amazon Elastic Kubernetes Service (Amazon EKS) with Amazon EC2 worker nodes. This option is not ideal because it requires the company to manage the EC2 instances that host the containers. The company would need to provision, configure, scale, patch, and monitor the EC2 instances, which can increase the operational overhead and infrastructure costs.
References:
? 1 AWS Fargate - Amazon Web Services
? 2 Amazon Elastic Container Service - Amazon Web Services
? 3 Amazon Elastic Kubernetes Service - Amazon Web Services
? 4 AWS Lambda FAQs - Amazon Web Services

NEW QUESTION 79
- (Topic 4)
A company is making a prototype of the infrastructure for its new website by manually provisioning the necessary infrastructure. This infrastructure includes an Auto Scaling group, an Application Load Balancer, and an Amazon RDS database. After the configuration has been thoroughly validated, the company wants the capability to immediately deploy the infrastructure for development and production use in two
Availability Zones in an automated fashion.
What should a solutions architect recommend to meet these requirements?

A. Use AWS Systems Manager to replicate and provision the prototype infrastructure in two Availability Zones.
B. Define the infrastructure as a template by using the prototype infrastructure as a guid
C. Deploy the infrastructure with AWS CloudFormation
D. Use AWS Config to record the inventory of resources that are used in the prototype infrastructur
E. Use AWS Config to deploy the prototype infrastructure into two Availability Zones.
F. Use AWS Elastic Beanstalk and configure it to use an automated reference to the prototype infrastructure to automatically deploy new environments in two Availability Zones

Answer: B

Explanation:
AWS CloudFormation is a service that helps you model and set up your AWS resources by using templates that describe all the resources that you want, such as Auto Scaling groups, load balancers, and databases. You can use AWS CloudFormation to deploy your infrastructure in an automated and consistent way across multiple environments and regions. You can also use AWS CloudFormation to update or delete your infrastructure as a single unit.
Reference URLs:
1 https://aws.amazon.com/cloudformation/
2 https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/Welcome.html
3 https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/cfn-whatis- concepts.html

NEW QUESTION 82
- (Topic 4)
A company runs a three-tier application in two AWS Regions. The web tier, the application tier, and the database tier run on Amazon EC2 instances. The company uses Amazon RDS for Microsoft SQL Server Enterprise for the database tier The database tier is experiencing high load when weekly and monthly reports are run. The company wants to reduce the load on the database tier.
Which solution will meet these requirements with the LEAST administrative effort?

A. Create read replica
B. Configure the reports to use the new read replicas.
C. Convert the RDS database to Amazon DynamoDB_ Configure the reports to use DynamoDB
D. Modify the existing RDS DB instances by selecting a larger instance size.
E. Modify the existing ROS DB instances and put the instances into an Auto Scaling group.

Answer: A

Explanation:
it allows the company to create read replicas of its RDS database and reduce the load on the database tier. By creating read replicas, the company can offload read traffic from the primary database instance to one or more replicas. By configuring the reports to use the new read replicas, the company can improve performance and availability of its database tier. References:
? Working with Read Replicas
? Read Replicas for Amazon RDS for SQL Server

NEW QUESTION 84
- (Topic 4)
A company wants to use high-performance computing and artificial intelligence to improve its fraud prevention and detection technology. The company requires distributed processing to complete a single workload as quickly as possible.
Which solution will meet these requirements?

A. Use Amazon Elastic Kubernetes Service (Amazon EKS) and multiple containers.
B. Use AWS ParallelCluster and the Message Passing Interface (MPI) libraries.
C. Use an Application Load Balancer and Amazon EC2 instances.
D. Use AWS Lambda functions.

Answer: B

Explanation:
AWS ParallelCluster is a service that allows you to create and manage high- performance computing (HPC) clusters on AWS. It supports multiple schedulers, including AWS Batch, which can run distributed workloads across multiple EC2 instances1.
MPI is a standard for message passing between processes in parallel computing. It provides functions for sending and receiving data, synchronizing processes, and managing communication groups2.
By using AWS ParallelCluster and MPI libraries, you can take advantage of the following benefits:
? You can easily create and configure HPC clusters that meet your specific requirements, such as instance type, number of nodes, network configuration, and storage options1.
? You can leverage the scalability and elasticity of AWS to run large-scale parallel
workloads without worrying about provisioning or managing servers1.
? You can use MPI libraries to optimize the performance and efficiency of your parallel applications by enabling inter-process communication and data exchange2.
? You can choose from a variety of MPI implementations that are compatible with AWS ParallelCluster, such as Open MPI, Intel MPI, and MPICH3.

NEW QUESTION 85
- (Topic 4)
A company operates an ecommerce website on Amazon EC2 instances behind an Application Load Balancer (ALB) in an Auto Scaling group. The site is experiencing performance issues related to a high request rate from illegitimate external systems with changing IP addresses. The security team is worried about potential DDoS attacks against the website. The company must block the illegitimate incoming requests in a way that has a minimal impact on legitimate users.
What should a solutions architect recommend?

A. Deploy Amazon Inspector and associate it with the ALB.
B. Deploy AWS WAF, associate it with the ALB, and configure a rate-limiting rule.
C. Deploy rules to the network ACLs associated with the ALB to block the incoming traffic.
D. Deploy Amazon GuardDuty and enable rate-limiting protection when configuring GuardDuty.

Answer: B

Explanation:
This answer is correct because it meets the requirements of blocking the illegitimate incoming requests in a way that has a minimal impact on legitimate users. AWS WAF is a web application firewall that helps protect your web applications or APIs against common web exploits that may affect availability, compromise security, or consume excessive resources. AWS WAF gives you control over how traffic reaches your applications by enabling you to create security rules that block common attack patterns, such as SQL injection or cross-site scripting, and rules that filter out specific traffic patterns you define. You can associate AWS WAF with an ALB to protect the web application from malicious requests. You can configure a rate-limiting rule in AWS WAF to track the rate of requests for each originating IP address and block requests from an IP address that exceeds a certain limit within a five-minute period. This way, you can mitigate potential DDoS attacks and improve the performance of your website.
References:
? https://docs.aws.amazon.com/waf/latest/developerguide/what-is-aws-waf.html
? https://docs.aws.amazon.com/waf/latest/developerguide/waf-rule-statement-type- rate-based.html

NEW QUESTION 90
- (Topic 4)
A company needs to integrate with a third-party data feed. The data feed sends a webhook to notify an external service when new data is ready for consumption A developer wrote an AWS Lambfe function to retrieve data when the company receives a webhook callback The developer must make the Lambda function available for the third party to call.
Which solution will meet these requirements with the MOST operational efficiency?

A. Create a function URL for the Lambda functio
B. Provide the Lambda function URL to the third party for the webhook.
C. Deploy an Application Load Balancer (ALB) in front of the Lambda functio
D. Provide the ALB URL to the third party for the webhook
E. Create an Amazon Simple Notification Service (Amazon SNS) topi
F. Attach the topic to the Lambda functio
G. Provide the public hostname of the SNS topic to the third party for the webhook.
H. Create an Amazon Simple Queue Service (Amazon SQS) queu
I. Attach the queue to the Lambda functio
J. Provide the public hostname of the SQS queue to the third party forthe webhook.

Answer: A

Explanation:
A function URL is a unique identifier for a Lambda function that can be used to invoke the function over HTTPS. It is composed of the API endpoint of the AWS Region where the function is deployed, and the name or ARN of the function1. By creating a function URL for the Lambda function, the solution can make the Lambda function available for the third party to call with the most operational efficiency.
* B. Deploy an Application Load Balancer (ALB) in front of the Lambda function. Provide the ALB URL to the third party for the webhook. This solution will not meet the requirement of the most operational efficiency, as it involves creating and managing an additional resource (ALB) that is not necessary for invoking a Lambda function over HTTPS2.
* C. Create an Amazon Simple Notification Service (Amazon SNS) topic. Attach the topic to the Lambda function. Provide the public hostname of the SNS topic to the third party for the webhook. This solution will not work, as Amazon SNS topics do not have public hostnames that can be used as webhooks. SNS topics are used to publish messages to subscribers, not to receive messages from external sources3.
* D. Create an Amazon Simple Queue Service (Amazon SQS) queue. Attach the queue to the Lamb-da function. Provide the public hostname of the SQS queue to the third party for the webhook. This solution will not work, as Amazon SQS queues do not have public hostnames that can be used as webhooks. SQS queues are used to send, store, and receive messages between AWS services, not to receive messages from external sources. Reference URL:
https://docs.aws.amazon.com/lambda/latest/dg/lambda-api-permissions- ref.html

NEW QUESTION 91
- (Topic 4)
A company designed a stateless two-tier application that uses Amazon EC2 in a single Availability Zone and an Amazon RDS Multi-AZ DB instance New company management wants to ensure the application is highly available.
What should a solutions architect do to meet this requirement?

A. Configure the application to use Multi-AZ EC2 Auto Scaling and create an Application Load Balancer
B. Configure the application to take snapshots of the EC2 instances and send them to a different AWS Region.
C. Configure the application to use Amazon Route 53 latency-based routing to feed requests to the application.
D. Configure Amazon Route 53 rules to handle incoming requests and create a Multi-AZ Application Load Balancer

Answer: A

Explanation:
https://docs.aws.amazon.com/autoscaling/ec2/userguide/as-add-availability- zone.html

NEW QUESTION 96
- (Topic 4)
A company wants to use an event-driven programming model with AWS Lambda. The company wants to reduce startup latency for Lambda functions that run on Java 11. The company does not have strict latency requirements for the applications. The company wants to reduce cold starts and outlier latencies when a function scales up.
Which solution will meet these requirements MOST cost-effectively?

A. Configure Lambda provisioned concurrency.
B. Increase the timeout of the Lambda functions.
C. Increase the memory of the Lambda functions.
D. Configure Lambda SnapStart.

Answer: D

Explanation:
To reduce startup latency for Lambda functions that run on Java 11, Lambda SnapStart is a suitable solution. Lambda SnapStart is a feature that enables faster cold starts and lower outlier latencies for Java 11 functions. Lambda SnapStart uses a pre- initialized Java Virtual Machine (JVM) to run the functions, which reduces the initialization time and memory footprint. Lambda SnapStart does not incur any additional charges. References:
? Lambda SnapStart for Java 11 Functions
? Lambda SnapStart FAQs

NEW QUESTION 99
- (Topic 4)
A gaming company wants to launch a new internet-facing application in multiple AWS Regions The application will use the TCP and UDP protocols for communication. The company needs to provide high availability and minimum latency for global users.
Which combination of actions should a solutions architect take to meet these requirements? (Select TWO.)

A. Create internal Network Load Balancers in front of the application in each Region.
B. Create external Application Load Balancers in front of the application in each Region.
C. Create an AWS Global Accelerator accelerator to route traffic to the load balancers in each Region.
D. Configure Amazon Route 53 to use a geolocation routing policy to distribute the traffic.
E. Configure Amazon CloudFront to handle the traffic and route requests to the application in each Region.

Answer: BC

Explanation:

This combination of actions will provide high availability and minimum latency for global users by using AWS Global Accelerator and Application Load Balancers. AWS Global Accelerator is a networking service that helps you improve the availability, performance, and security of your internet-facing applications by using the AWS global network. It provides two global static public IPs that act as a fixed entry point to your application endpoints, such as Application Load Balancers, in multiple Regions1. Global Accelerator uses the AWS backbone network to route traffic to the optimal regional
endpoint based on health, client location, and policies that you configure. It also offers TCP and UDP support, traffic encryption, and DDoS protection2. Application Load Balancers are external load balancers that distribute incoming application traffic across multiple targets, such as EC2 instances, in multiple Availability Zones. They support both HTTP and HTTPS (SSL/TLS) protocols, and offer advanced features such as content-based routing, health checks, and integration with other AWS services3. By creating external Application Load Balancers in front of the application in each Region, you can ensure that the application can handle varying load patterns and scale on demand. By creating an AWS Global Accelerator accelerator to route traffic to the load balancers in each Region, you can leverage the performance, security, and availability of the AWS global network to deliver the best possible user experience.
References: 1: What is AWS Global Accelerator? - AWS Global Accelerator4, Overview section2: Network Acceleration Service - AWS Global Accelerator - AWS5, Why AWS Global Accelerator? section. 3: What is an Application Load Balancer? - Elastic Load Balancing6, Overview section.

NEW QUESTION 104
- (Topic 4)
A media company collects and analyzes user activity data on premises. The company wants to migrate this capability to AWS. The user activity data store will continue to grow
and will be petabytes in size. The company needs to build a highly available data ingestion solution that facilitates on-demand analytics of existing data and new data with SQL.
Which solution will meet these requirements with the LEAST operational overhead?

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

Answer: B

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

NEW QUESTION 107
- (Topic 4)
A company hosts an application used to upload files to an Amazon S3 bucket Once uploaded, the files are processed to extract metadata which takes less than 5 seconds The volume and frequency of the uploads varies from a few files each hour to hundreds of concurrent uploads The company has asked a solutions architect to design a cost-effective architecture that will meet these requirements.
What should the solutions architect recommend?

A. Configure AWS CloudTrail trails to tog S3 API calls Use AWS AppSync to process the files.
B. Configure an object-created event notification within the S3 bucket to invoke an AWS Lambda function to process the files.
C. Configure Amazon Kinesis Data Streams to process and send data to Amazon S3. Invoke an AWS Lambda function to process the files.
D. Configure an Amazon Simple Notification Service (Amazon SNS) topic to process the files uploaded to Amazon S3 Invoke an AWS Lambda function to process the files.

Answer: B

Explanation:
This option is the most cost-effective and scalable way to process the files uploaded to S3. AWS CloudTrail is used to log API calls, not to trigger actions based on them. AWS AppSync is a service for building GraphQL APIs, not for processing files. Amazon Kinesis Data Streams is used to ingest and process streaming data, not to send data to S3. Amazon SNS is a pub/sub service that can be used to notify subscribers of events, not to process files. References:
? Using AWS Lambda with Amazon S3
? AWS CloudTrail FAQs
? What Is AWS AppSync?
? [What Is Amazon Kinesis Data Streams?]
? [What Is Amazon Simple Notification Service?]

NEW QUESTION 109
- (Topic 4)
A company has resources across multiple AWS Regions and accounts. A newly hired solutions architect discovers a previous employee did not provide details about the resources invent^. The solutions architect needs to build and map the relationship details of the various workloads across all accounts.
Which solution will meet these requirements in the MOST operationally efficient way?

A. Use AWS Systems Manager Inventory to generate a map view from the detailed view report.
B. Use AWS Step Functions to collect workload details Build architecture diagrams of theworkloads manually.
C. Use Workload Discovery on AWS to generate architecture diagrams of the workloads.
D. Use AWS X-Ray to view the workload details Build architecture diagrams with relationships

Answer: C

Explanation:
Workload Discovery on AWS (formerly called AWS Perspective) is a tool that visualizes AWS Cloud workloads. It maintains an inventory of the AWS resources across your accounts and Regions, mapping relationships between them, and displaying them in a web UI. It also allows you to query AWS Cost and Usage

Reports, search for resources, save and export architecture diagrams, and more1. By using Workload Discovery on AWS, the solution can build and map the relationship details of the various workloads across all accounts with the least operational effort.
* A. Use AWS Systems Manager Inventory to generate a map view from the detailed view report. This solution will not meet the requirement of building and mapping the relationship details of the various workloads across all accounts, as AWS Systems Manager Inventory is a feature that collects metadata from your managed instances and stores it in a central Amazon S3 bucket. It does not provide a map view or architecture diagrams of the workloads2.
* B. Use AWS Step Functions to collect workload details Build architecture diagrams of the work-loads manually. This solution will not meet the requirement of the least operational effort, as it involves creating and managing state machines to orchestrate the workload details collection, and building architecture diagrams manually.
* D. Use AWS X-Ray to view the workload details Build architecture diagrams with relationships. This solution will not meet the requirement of the least operational effort, as it involves instrumenting your applications with X-Ray SDKs to collect workload details, and building architecture diagrams manually.
Reference URL: https://aws.amazon.com/solutions/implementations/workload-discovery- on-aws/

NEW QUESTION 112
- (Topic 4)
A company is deploying an application that processes streaming data in near-real time The company plans to use Amazon EC2 instances for the workload The network architecture must be configurable to provide the lowest possible latency between nodes
Which combination of network solutions will meet these requirements? (Select TWO)

A. Enable and configure enhanced networking on each EC2 instance
B. Group the EC2 instances in separate accounts
C. Run the EC2 instances in a cluster placement group
D. Attach multiple elastic network interfaces to each EC2 instance
E. Use Amazon Elastic Block Store (Amazon EBS) optimized instance types.

Answer: AC

Explanation:
These options are the most suitable ways to configure the network architecture to provide the lowest possible latency between nodes. Option A enables and configures enhanced networking on each EC2 instance, which is a feature that improves the network performance of the instance by providing higher bandwidth, lower latency, and lower jitter. Enhanced networking uses single root I/O virtualization (SR-IOV) or Elastic Fabric Adapter (EFA) to provide direct access to the network hardware. You can enable and configure enhanced networking by choosing a supported instance type and a compatible operating system, and installing the required drivers. Option C runs the EC2 instances in a cluster placement group, which is a logical grouping of instances within a single Availability Zone that are placed close together on the same underlying hardware. Cluster placement groups provide the lowest network latency and the highest network throughput among the placement group options. You can run the EC2 instances in a cluster placement group by creating a placement group and launching the instances into it. Option B is not suitable because grouping the EC2 instances in separate accounts does not provide the lowest possible latency between nodes. Separate accounts are used to isolate and organize resources for different purposes, such as security, billing, or compliance. However, they do not affect the network performance or proximity of the instances. Moreover, grouping the EC2 instances in separate accounts would incur additional costs and complexity, and it would require setting up cross-account networking and permissions.
Option D is not suitable because attaching multiple elastic network interfaces to each EC2 instance does not provide the lowest possible latency between nodes. Elastic network interfaces are virtual network interfaces that can be attached to EC2 instances to provide additional network capabilities, such as multiple IP addresses, multiple subnets, or enhanced security. However, they do not affect the network performance or proximity of the instances. Moreover, attaching multiple elastic network interfaces to each EC2 instance would consume additional resources and limit the instance type choices.
Option E is not suitable because using Amazon EBS optimized instance types does not provide the lowest possible latency between nodes. Amazon EBS optimized instance types are instances that provide dedicated bandwidth for Amazon EBS volumes, which are block storage volumes that can be attached to EC2 instances. EBS optimized instance types improve the performance and consistency of the EBS volumes, but they do not affect the network performance or proximity of the instances. Moreover, using EBS optimized instance types would incur additional costs and may not be necessary for the streaming data workload.
References:
? Enhanced networking on Linux
? Placement groups
? Elastic network interfaces
? Amazon EBS-optimized instances

NEW QUESTION 114
- (Topic 4)
A company runs analytics software on Amazon EC2 instances The software accepts job requests from users to process data that has been uploaded to Amazon S3 Users report that some submitted data is not being processed Amazon CloudWatch reveals that the EC2 instances have a consistent CPU utilization at or near 100% The company wants to improve system performance and scale the system based on user load.
What should a solutions architect do to meet these requirements?

A. Create a copy of the instance Place all instances behind an Application Load Balancer
B. Create an S3 VPC endpoint for Amazon S3 Update the software to reference the endpoint
C. Stop the EC2 instance
D. Modify the instance type to one with a more powerful CPU and more memor
E. Restart the instances.
F. Route incoming requests to Amazon Simple Queue Service (Amazon SQS) Configure an EC2 Auto Scaling group based on queue size Update the software to read from thequeue.

Answer: D

Explanation:
This option is the best solution because it allows the company to decouple the analytics software from the user requests and scale the EC2 instances dynamically based on the demand. By using Amazon SQS, the company can create a queue that stores the user requests and acts as a buffer between the users and the analytics software. This way, the software can process the requests at its own pace without losing any data or overloading the EC2 instances. By using EC2 Auto Scaling, the company can create an Auto Scaling group that launches or terminates EC2 instances automatically based on the size of the queue. This way, the company can ensure that there are enough instances to handle the load and optimize the cost and performance of the system. By updating the software to read from the queue, the company can enable the analytics software to consume the requests from the queue and process the data from Amazon S3.
* A. Create a copy of the instance Place all instances behind an Application Load Balancer. This option is not optimal because it does not address the root cause of the problem, which is the high CPU utilization of the EC2 instances. An Application Load Balancer can distribute the incoming traffic across multiple instances, but it cannot scale the instances based on the load or reduce the processing time of the analytics software. Moreover, this option can incur additional costs for the load balancer and the extra instances.
* B. Create an S3 VPC endpoint for Amazon S3 Update the software to reference the endpoint. This option is not effective because it does not solve the issue of

the high CPU utilization of the EC2 instances. An S3 VPC endpoint can enable the EC2 instances to access Amazon S3 without going through the internet, which can improve the network performance and security. However, it cannot reduce the processing time of the analytics software or scale the instances based on the load.
* C. Stop the EC2 instances. Modify the instance type to one with a more powerful CPU and more memory. Restart the instances. This option is not scalable because it does not account for the variability of the user load. Changing the instance type to a more powerful one can improve the performance of the analytics software, but it cannot adjust the number of instances based on the demand. Moreover, this option can increase the cost of the system and cause downtime during the instance modification.
References:
? 1 Using Amazon SQS queues with Amazon EC2 Auto Scaling - Amazon EC2 Auto Scaling
? 2 Tutorial: Set up a scaled and load-balanced application - Amazon EC2 Auto Scaling
? 3 Amazon EC2 Auto Scaling FAQs

NEW QUESTION 118
- (Topic 4)
A company has created a multi-tier application for its ecommerce website. The website uses an Application Load Balancer that resides in the public subnets, a web tier in the public subnets, and a MySQL cluster hosted on Amazon EC2 instances in the private subnets. The MySQL database needs to retrieve product catalog and pricing information that is hosted on the internet by a third-party provider. A solutions architect must devise a strategy that maximizes security without increasing operational overhead. What should the solutions architect do to meet these requirements?

A. Deploy a NAT instance in the VP
B. Route all the internet-based traffic through the NAT instance.
C. Deploy a NAT gateway in the public subnet
D. Modify the private subnet route table to direct all internet-bound traffic to the NAT gateway.
E. Configure an internet gateway and attach it to the VP
F. Modify the private subnet route table to direct internet-bound traffic to the internet gateway.
G. Configure a virtual private gateway and attach it to the VP
H. Modify the private subnet route table to direct internet-bound traffic to the virtual private gateway.

Answer: B

Explanation:
To allow the MySQL database in the private subnets to access the internet without exposing it to the public, a NAT gateway is a suitable solution. A NAT gateway enables instances in a private subnet to connect to the internet or other AWS services, but prevents the internet from initiating a connection with those instances. A NAT gateway resides in the public subnets and can handle high throughput of traffic with low latency. A NAT gateway is also a managed service that does not require any operational overhead. References:
? NAT Gateways
? NAT Gateway Pricing

NEW QUESTION 121
- (Topic 4)
A company has a production workload that is spread across different AWS accounts in various AWS Regions. The company uses AWS Cost Explorer to continuously monitor costs and usage. The company wants to receive notifications when the cost and usage spending of the workload is unusual.
Which combination of steps will meet these requirements? (Select TWO.)

A. In the AWS accounts where the production workload is running, create a linked account budget by using Cost Explorer in the AWS Cost Management console
B. In ys AWS accounts where the production workload is running, create a linked account monitor by using AWS Cost Anomaly Detection in the AWS Cost Management console
C. In the AWS accounts where the production workload is running, create a Cost and Usage Report by using Cost Anomaly Detection in the AWS Cost Management console.
D. Create a report and send email messages to notify the company on a weekly basis.
E. Create a subscription with the required threshold and notify the company by using weekly summaries.

Answer: BE

Explanation:
AWS Cost Anomaly Detection allows you to create monitors that track the cost and usage of your AWS resources and alert you when there is an unusual spending pattern. You can create monitors based on different dimensions, such as AWS services, accounts, tags, or cost categories. You can also create alert subscriptions that notify you by email or Amazon SNS when an anomaly is detected. You can specify the threshold and frequency of the alerts, and choose to receive weekly summaries of your anomalies. Reference URLs:
1 https://aws.amazon.com/aws-cost-management/aws-cost-anomaly-detection/
2 https://docs.aws.amazon.com/cost-management/latest/userguide/getting-started-ad.html
3 https://docs.aws.amazon.com/cost-management/latest/userguide/manage-ad.html

NEW QUESTION 124
- (Topic 4)
A company wants to manage Amazon Machine Images (AMIs). The company currently copies AMIs to the same AWS Region where the AMIs were created. The company needs to design an application that captures AWS API calls and sends alerts whenever the Amazon EC2 CreateImage API operation is called within the company's account.
Which solution will meet these requirements with the LEAST operational overhead?

A. Create an AWS Lambda function to query AWS CloudTrail logs and to send an alert when a CreateImage API call is detected.
B. Configure AWS CloudTrail with an Amazon Simple Notification Service (Amazon SNS) notification that occurs when updated logs are sent to Amazon S3. Use Amazon Athena to create a new table and to query on CreateImage when an API call is detected.
C. Create an Amazon EventBridge (Amazon CloudWatch Events) rule for the CreateImage API cal
D. Configure the target as an Amazon Simple Notification Service (Amazon SNS) topic to send an alert when a CreateImage API call is detected.
E. Configure an Amazon Simple Queue Service (Amazon SQS) FIFO queue as a target for AWS CloudTrail log
F. Create an AWS Lambda function to send an alert to an Amazon Simple Notification Service (Amazon SNS) topic when a CreateImage API call is detected.

Answer: C

Explanation:
https://docs.aws.amazon.com/AWSEC2/latest/WindowsGuide/monitor-ami-events.html#:~:text=For%20example%2C%20you%20can%20create%20an%20EventBridge%20rule%20that%20detects%20when%20the%20AMI%20creation%20process%20has%20completed%20and%20then%20invokes%20an%20Amazon%20SNS%20topic%20to% 20send%20an%20email%20notification%20to%20you.

NEW QUESTION 125
- (Topic 4)
A company stores critical data in Amazon DynamoDB tables in the company's AWS account. An IT administrator accidentally deleted a DynamoDB table. The deletion caused a significant loss of data and disrupted the company's operations. The company wants to prevent this type of disruption in the future.
Which solution will meet this requirement with the LEAST operational overhead?

A. Configure a trail in AWS CloudTrai
B. Create an Amazon EventBridge rule for delete action
C. Create an AWS Lambda function to automatically restore deleted DynamoDBtables.
D. Create a backup and restore plan for the DynamoDB table
E. Recover the DynamoDB tables manually.
F. Configure deletion protection on the DynamoDB tables.
G. Enable point-in-time recovery on the DynamoDB tables.

Answer: C

Explanation:
Deletion protection is a feature of DynamoDB that prevents accidental deletion of tables. When deletion protection is enabled, you cannot delete a table unless you explicitly disable it first. This adds an extra layer of security and reduces the risk of data loss and operational disruption. Deletion protection is easy to enable and disable using the AWS Management Console, the AWS CLI, or the DynamoDB API. This solution has the least operational overhead, as you do not need to create, manage, or invoke any additional resources or services. References:
? Using deletion protection to protect your table
? Preventing Accidental Table Deletion in DynamoDB
? Amazon DynamoDB now supports table deletion protection

NEW QUESTION 126
- (Topic 4)
A company has a large workload that runs every Friday evening. The workload runs on Amazon EC2 instances that are in two Availability Zones in the us-east-1 Region. Normally, the company must run no more than two instances at all times. However, the company wants to scale up to six instances each Friday to handle a regularly repeating increased workload.
Which solution will meet these requirements with the LEAST operational overhead?

A. Create a reminder in Amazon EventBridge to scale the instances.
B. Create an Auto Scaling group that has a scheduled action.
C. Create an Auto Scaling group that uses manual scaling.
D. Create an Auto Scaling group that uses automatic scaling.

Answer: B

Explanation:
An Auto Scaling group is a collection of EC2 instances that share similar characteristics and can be scaled in or out automatically based on demand. An Auto Scaling group can have a scheduled action, which is a configuration that tells the group to scale to a specific size at a specific time. This way, the company can scale up to six instances each Friday evening to handle the increased workload, and scale down to two instances at other times to save costs. This solution meets the requirements with the least operational overhead, as it does not require manual intervention or custom scripts. References:
? 1 explains how to create a scheduled action for an Auto Scaling group.
? 2 describes the concept and benefits of an Auto Scaling group.

NEW QUESTION 130
- (Topic 4)
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 131
- (Topic 4)
A company hosts a website on Amazon EC2 instances behind an Application Load Balancer (ALB) The website serves static content Website traffic is increasing

and the company is concerned about a potential increase in cost.
What should a solutions architect do to reduce the cost of the website?

A. Create an Amazon CloudFront distribution to cache static files at edge locations.
B. Create an Amazon ElastiCache cluster Connect the ALB to the ElastiCache cluster to serve cached files.
C. Create an AWS WAF web ACL and associate it with the AL
D. Add a rule to the web ACL to cache static files.
E. Create a second ALB in an alternative AWS Region Route user traffic to the closest Region to minimize data transfer costs

Answer: A

Explanation:
Amazon CloudFront is a content delivery network (CDN) that can improve the performance and reduce the cost of serving static content from a website. CloudFront
can cache static files at edge locations closer to the users, reducing the latency and data transfer costs. CloudFront can also integrate with Amazon S3 as the origin for the static content, eliminating the need for EC2 instances to host the website. CloudFront meets all the requirements of the question, while the other options do not. References:
? https://aws.amazon.com/blogs/architecture/architecting-a-low-cost-web-content-publishing-system/
? https://nodeployfriday.com/posts/static-website-hosting/
? https://aws.amazon.com/cloudfront/

NEW QUESTION 136
- (Topic 4)
A company has two VPCs that are located in the us-west-2 Region within the same AWS account. The company needs to allow network traffic between these VPCs. Approximately 500 GB of data transfer will occur between the VPCs each month.
What is the MOST cost-effective solution to connect these VPCs?

A. Implement AWS Transit Gateway to connect the VPC
B. Update the route tables of each VPC to use the transit gateway for inter-VPC communication.
C. Implement an AWS Site-to-Site VPN tunnel between the VPC
D. Update the route tables of each VPC to use the VPN tunnel for inter-VPC communication.
E. Set up a VPC peering connection between the VPC
F. Update the route tables of each VPC to use the VPC peering connection for inter-VPC communication.
G. Set up a 1 GB AWS Direct Connect connection between the VPC
H. Update the route tables of each VPC to use the Direct Connect connection for inter-VPC communication.

Answer: C

Explanation:
To connect two VPCs in the same Region within the same AWS account, VPC peering is the most cost-effective solution. VPC peering allows direct network traffic between the VPCs without requiring a gateway, VPN connection, or AWS Transit Gateway. VPC peering also does not incur any additional charges for data transfer between the VPCs.
References:
? What Is VPC Peering?
? VPC Peering Pricing

NEW QUESTION 138
- (Topic 4)
A company has hired a solutions architect to design a reliable architecture for its application. The application consists of one Amazon RDS DB instance and two manually provisioned Amazon EC2 instances that run web servers. The EC2 instances are located in a single Availability Zone.
An employee recently deleted the DB instance, and the application was unavailable for 24 hours as a result. The company is concerned with the overall reliability of its environment.
What should the solutions architect do to maximize reliability of the application's infrastructure?

A. Delete one EC2 instance and enable termination protection on the other EC2 instanc
B. Update the DB instance to be Multi-AZ, and enable deletion protection.
C. Update the DB instance to be Multi-AZ, and enable deletion protectio
D. Place the EC2 instances behind an Application Load Balancer, and run them in an EC2 Auto Scaling group across multiple Availability Zones.
E. Create an additional DB instance along with an Amazon API Gateway and an AWS Lambda functio
F. Configure the application to invoke the Lambda function through API Gatewa
G. Have the Lambda function write the data to the two DB instances.
H. Place the EC2 instances in an EC2 Auto Scaling group that has multiple subnets located in multiple Availability Zone
I. Use Spot Instances instead of On-Demand Instance
J. Set up Amazon CloudWatch alarms to monitor the health of the instance
K. Update the DB instance to be Multi-AZ, and enable deletion protection.

Answer: B

Explanation:
This answer is correct because it meets the requirements of maximizing the reliability of the application’s infrastructure. You can update the DB instance to be Multi-AZ, which means that Amazon RDS automatically provisions and maintains a synchronous standby replica in a different Availability Zone. The primary DB instance is synchronously replicated across Availability Zones to a standby replica to provide data redundancy and minimize latency spikes during system backups. Running a DB instance with high availability can enhance availability during planned system maintenance. It can also help protect your databases against DB instance failure and Availability Zone disruption. You can also enable deletion protection on the DB instance, which prevents the DB instance from being deleted by any user. You can place the EC2 instances behind an Application Load Balancer, which distributes incoming application traffic across multiple targets, such as EC2 instances, in multiple Availability Zones. This increases the availability and fault tolerance of your applications. You can run the EC2 instances in an EC2 Auto Scaling group across multiple Availability Zones, which ensures that you have the correct number of EC2 instances available to handle the load for your application. You can use scaling policies to adjust the number of instances in your Auto Scaling group in response to changing demand.
References:
? https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Concepts.MultiAZSin gleStandby.html
? https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_DeleteInstan ce.html#USER_DeleteInstance.DeletionProtection

? https://docs.aws.amazon.com/elasticloadbalancing/latest/application/introduction.h tml
? https://docs.aws.amazon.com/autoscaling/ec2/userguide/AutoScalingGroup.html

NEW QUESTION 143
- (Topic 4)
A company runs a Java-based job on an Amazon EC2 instance. The job runs every hour and takes 10 seconds to run. The job runs on a scheduled interval and consumes 1 GB of memory. The CPU utilization of the instance is low except for short surges during which the job uses the maximum CPU available. The company wants to optimize the costs to run the job.
Which solution will meet these requirements?

A. Use AWS App2Container (A2C) to containerize the jo
B. Run the job as an Amazon Elastic Container Service (Amazon ECS) task on AWS Fargate with 0.5 virtual CPU (vCPU) and 1 GB of memory.
C. Copy the code into an AWS Lambda function that has 1 GB of memor
D. Create an Amazon EventBridge scheduled rule to run the code each hour.
E. Use AWS App2Container (A2C) to containerize the jo
F. Install the container in the existing Amazon Machine Image (AMI). Ensure that the schedule stops the container when the task finishes.
G. Configure the existing schedule to stop the EC2 instance at the completion of the job and restart the EC2 instance when the next job starts.

Answer: B

Explanation:
AWS Lambda is a serverless compute service that allows you to run code without provisioning or managing servers. You can create Lambda functions using various languages, including Java, and specify the amount of memory and CPU allocated to your function. Lambda charges you only for the compute time you consume, which is calculated based on the number of requests and the duration of your code execution. You can use Amazon EventBridge to trigger your Lambda function on a schedule, such as every hour, using cron or rate expressions. This solution will optimize the costs to run the job, as you will not pay for any idle time or unused resources, unlike running the job on an EC2 instance. References: 1: AWS Lambda - FAQs2, General Information section2: Tutorial: Schedule AWS Lambda functions using EventBridge3, Introduction section3: Schedule expressions using rate or cron - AWS Lambda4, Introduction section.

NEW QUESTION 148
- (Topic 4)
An ecommerce company runs applications in AWS accounts that are part of an organization in AWS Organizations The applications run on Amazon Aurora PostgreSQL databases across all the accounts The company needs to prevent malicious activity and must identify abnormal failed and incomplete login attempts to the databases
Which solution will meet these requirements in the MOST operationally efficient way?

A. Attach service control policies (SCPs) to the root of the organization to identify the failed login attempts
B. Enable the Amazon RDS Protection feature in Amazon GuardDuty for the member accounts of the organization
C. Publish the Aurora general logs to a log group in Amazon CloudWatch Logs Export the log data to a central Amazon S3 bucket
D. Publish all the Aurora PostgreSQL database events in AWS CloudTrail to a central Amazon S3 bucket

Answer: C

Explanation:
This option is the most operationally efficient way to meet the requirements because it allows the company to monitor and analyze the database login activity across all the accounts in the organization. By publishing the Aurora general logs to a log group in Amazon CloudWatch Logs, the company can enable the logging of the database connections, disconnections, and failed authentication attempts. By exporting the log data to a central Amazon S3 bucket, the company can store the log data in a durable and cost- effective way and use other AWS services or tools to perform further analysis or alerting on the log data. For example, the company can use Amazon Athena to query the log data in Amazon S3, or use Amazon SNS to send notifications based on the log data.
* A. Attach service control policies (SCPs) to the root of the organization to identify the failed login attempts. This option is not effective because SCPs are not designed to identify the failed login attempts, but to restrict the actions that the users and roles can perform in the member accounts of the organization. SCPs are applied to the AWS API calls, not to the database login attempts. Moreover, SCPs do not provide any logging or analysis capabilities for the database activity.
* B. Enable the Amazon RDS Protection feature in Amazon GuardDuty for the member accounts of the organization. This option is not optimal because the Amazon RDS Protection feature in Amazon GuardDuty is not available for Aurora PostgreSQL databases, but only for Amazon RDS for MySQL and Amazon RDS for MariaDB databases. Moreover, the Amazon RDS Protection feature does not monitor the database login attempts, but the network and API activity related to the RDS instances.
* D. Publish all the Aurora PostgreSQL database events in AWS CloudTrail to a central Amazon S3 bucket. This option is not sufficient because AWS CloudTrail does not capture the database login attempts, but only the AWS API calls made by or on behalf of the Aurora PostgreSQL database. For example, AWS CloudTrail can record the events such as creating, modifying, or deleting the database instances, clusters, or snapshots, but not the events such as connecting, disconnecting, or failing to authenticate to the database. References:
? 1 Working with Amazon Aurora PostgreSQL - Amazon Aurora
? 2 Working with log groups and log streams - Amazon CloudWatch Logs
? 3 Exporting Log Data to Amazon S3 - Amazon CloudWatch Logs
? [4] Amazon GuardDuty FAQs
? [5] Logging Amazon RDS API Calls with AWS CloudTrail - Amazon Relational Database Service

NEW QUESTION 151
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