Amazon-Web-Services

Exam Questions SAA-C03

AWS Certified Solutions Architect - Associate (SAA-C03)

NEW QUESTION 1
- (Topic 1)
A development team runs monthly resource-intensive tests on its general purpose Amazon RDS for MySQL DB instance with Performance Insights enabled. The testing lasts for 48 hours once a month and is the only process that uses the database. The team wants to reduce the cost of running the tests without reducing the compute and memory attributes of the DB instance.
Which solution meets these requirements MOST cost-effectively?

A. Stop the DB instance when tests are complete
B. Restart the DB instance when required.
C. Use an Auto Scaling policy with the DB instance to automatically scale when tests are completed.
D. Create a snapshot when tests are complete
E. Terminate the DB instance and restore the snapshot when required.
F. Modify the DB instance to a low-capacity instance when tests are complete
G. Modify the DB instance again when required.

Answer: A

Explanation:
To reduce the cost of running the tests without reducing the compute and memory attributes of the Amazon RDS for MySQL DB instance, the development team can stop the instance when tests are completed and restart it when required. Stopping the DB instance when not in use can help save costs because customers are only charged for storage while the DB instance is stopped. During this time, automated backups and automated DB instance maintenance are suspended. When the instance is restarted, it retains the same configurations, security groups, and DB parameter groups as when it was stopped.
Reference:
Amazon RDS Documentation: Stopping and Starting a DB instance (https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_StopInstance.html)

NEW QUESTION 2
- (Topic 1)
A company has a three-tier web application that is deployed on AWS. The web servers are
deployed in a public subnet in a VPC. The application servers and database servers are deployed in private subnets in the same VPC. The company has deployed a third-party virtual firewall appliance from AWS Marketplace in an inspection VPC. The appliance is configured with an IP interface that can accept IP packets.
A solutions architect needs to Integrate the web application with the appliance to inspect all traffic to the application before the traffic teaches the web server.
Which solution will moot these requirements with the LEAST operational overhead?

A. Create a Network Load Balancer the public subnet of the application's VPC to route the traffic lo the appliance for packet inspection
B. Create an Application Load Balancer in the public subnet of the application's VPC to route the traffic to the appliance for packet inspection
C. Deploy a transit gateway m the inspection VPC Configure route tables to route the incoming pockets through the transit gateway
D. Deploy a Gateway Load Balancer in the inspection VPC Create a Gateway Load Balancer endpoint to receive the incoming packets and forward the packets to the appliance

Answer: D

Explanation:
https://aws.amazon.com/blogs/networking-and-content-delivery/scaling-network-traffic-inspection-using-aws-gateway-load-balancer/

NEW QUESTION 3
- (Topic 1)
A company uses NFS to store large video files in on-premises network attached storage. Each video file ranges in size from 1MB to 500 GB. The total storage is 70 TB and is no longer growing. The company decides to migrate the video files to Amazon S3. The company must migrate the video files as soon as possible while using the least possible network bandwidth.
Which solution will meet these requirements?

A. Create an S3 bucket Create an IAM role that has permissions to write to the S3 bucke
B. Use the AWS CLI to copy all files locally to the S3 bucket.
C. Create an AWS Snowball Edge jo
D. Receive a Snowball Edge device on premise
E. Use the Snowball Edge client to transfer data to the devic
F. Return the device so that AWS can import the data into Amazon S3.
G. Deploy an S3 File Gateway on premise
H. Create a public service endpoint to connect to the S3 File Gateway Create an S3 bucket Create a new NFS file share on the S3 File Gateway Point the new file share to the S3 bucke
I. Transfer the data from the existing NFS file share to the S3 File Gateway.
J. Set up an AWS Direct Connect connection between the on-premises network and AW
K. Deploy an S3 File Gateway on premise
L. Create a public virtual interlace (VIF) to connect to the S3 File Gatewa
M. Create an S3 bucke
N. Create a new NFS file share on the S3 File Gatewa
O. Point the new file share to the S3 bucke
P. Transfer the data from the existing NFS file share to the S3 File Gateway.

Answer: B

Explanation:
The basic difference between Snowball and Snowball Edge is the capacity they provide. Snowball provides a total of 50 TB or 80 TB, out of which 42 TB or 72 TB is available, while Amazon Snowball Edge provides 100 TB, out of which 83 TB is available.

NEW QUESTION 4
- (Topic 1)
A company is developing an application that provides order shipping statistics for retrieval by a REST API. The company wants to extract the shipping statistics,

organize the data into an easy-to-read HTML format, and send the report to several email addresses at the same time every morning.
Which combination of steps should a solutions architect take to meet these requirements? (Choose two.)

A. Configure the application to send the data to Amazon Kinesis Data Firehose.
B. Use Amazon Simple Email Service (Amazon SES) to format the data and to send the report by email.
C. Create an Amazon EventBridge (Amazon CloudWatch Events) scheduled event that invokes an AWS Glue job to query the application's API for the data.
D. Create an Amazon EventBridge (Amazon CloudWatch Events) scheduled event that invokes an AWS Lambda function to query the application's API for the data.
E. Store the application data in Amazon S3. Create an Amazon Simple Notification Service (Amazon SNS) topic as an S3 event destination to send the report by

Answer: BD

Explanation:
https://docs.aws.amazon.com/ses/latest/dg/send-email-formatted.html
* D. Create an Amazon EventBridge (Amazon CloudWatch Events) scheduled event that invokes an AWS Lambda function to query the application's API for the data. This step can be done using AWS Lambda to extract the shipping statistics and organize the data into an HTML format.
* B. Use Amazon Simple Email Service (Amazon SES) to format the data and send the report by email. This step can be done by using Amazon SES to send the report to multiple email addresses at the same time every morning.
Therefore, options D and B are the correct choices for this question. Option A is incorrect because Kinesis Data Firehose is not necessary for this use case. Option C is incorrect because AWS Glue is not required to query the application's API. Option E is incorrect because S3 event notifications cannot be used to send the report by email.

NEW QUESTION 5
- (Topic 1)
A company uses 50 TB of data for reporting. The company wants to move this data from on premises to AWS A custom application in the company's data center runs a weekly data transformation job. The company plans to pause the application until the data transfer is complete and needs to begin the transfer process as soon as possible.
The data center does not have any available network bandwidth for additional workloads A solutions architect must transfer the data and must configure the transformation job to continue to run in the AWS Cloud
Which solution will meet these requirements with the LEAST operational overhead?

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

Answer: D

Explanation:
AWS Snowball Edge is a type of Snowball device with on-board storage and compute power for select AWS capabilities. Snowball Edge can do local processing and edge- computing workloads in addition to transferring data between your local environment and the AWS Cloud1. Users can order an AWS Snowball Edge Storage Optimized device that includes Amazon EC2 compute to move 50 TB of data from on premises to AWS. The Storage Optimized device has 80 TB of usable storage and 40 vCPUs of compute power2. Users can copy the data to the device using the AWS OpsHub graphical user interface or the Snowball client command line tool3. Users can also create and run Amazon EC2 instances on the device using Amazon Machine Images (AMIs) that are compatible with the sbe1 instance type. Users can use the Snowball Edge device to transfer the data and run the transformation job locally without using any network bandwidth.
Users can also create a new EC2 instance on AWS to run the transformation application after the data transfer is complete. Amazon EC2 is a web service that provides secure, resizable compute capacity in the cloud. Users can launch an EC2 instance in the same AWS Region where they send their Snowball Edge device and choose an AMI that matches their application requirements. Users can use the EC2 instance to continue running the transformation job in the AWS Cloud.

NEW QUESTION 6
- (Topic 1)
A company provides a Voice over Internet Protocol (VoIP) service that uses UDP connections. The service consists of Amazon EC2 instances that run in an Auto Scaling group. The company has deployments across multiple AWS Regions.
The company needs to route users to the Region with the lowest latency. The company also needs automated failover between Regions.
Which solution will meet these requirements?

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

Answer: D

Explanation:
https://aws.amazon.com/global-accelerator/faqs/
HTTP /HTTPS - ALB ; TCP and UDP - NLB; Lowest latency routing and more throughput. Also supports failover, uses Anycast Ip addressing - Global Accelerator

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

NEW QUESTION 7
- (Topic 1)
A solutions architect is using Amazon S3 to design the storage architecture of a new digital media application. The media files must be resilient to the loss of an Availability Zone Some files are accessed frequently while other files are rarely accessed in an unpredictable pattern. The solutions architect must minimize the costs of storing and retrieving the media files.
Which storage option meets these requirements?

A. S3 Standard
B. S3 Intelligent-Tiering
C. S3 Standard-Infrequent Access {S3 Standard-IA)
D. S3 One Zone-Infrequent Access (S3 One Zone-IA)

Answer: B

Explanation:
S3 Intelligent-Tiering - Perfect use case when you don't know the frequency of access or irregular patterns of usage.
Amazon S3 offers a range of storage classes designed for different use cases. These include S3 Standard for general-purpose storage of frequently accessed data; S3 Intelligent-Tiering for data with unknown or changing access patterns; S3 Standard- Infrequent Access (S3 Standard-IA) and S3 One Zone-Infrequent Access (S3 One Zone- IA) for long-lived, but less frequently accessed data; and Amazon S3 Glacier (S3 Glacier) and Amazon S3 Glacier Deep Archive (S3 Glacier Deep Archive) for long-term archive and digital preservation. If you have data residency requirements that can't be met by an existing AWS Region, you can use the S3 Outposts storage class to store your S3 data on- premises. Amazon S3 also offers capabilities to manage your data throughout its lifecycle. Once an S3 Lifecycle policy is set, your data will automatically transfer to a different storage class without any changes to your application.
https://aws.amazon.com/getting-started/hands-on/getting-started-using-amazon-s3-intelligent-tiering/?nc1=h_ls

NEW QUESTION 8
- (Topic 1)
A company wants to run its critical applications in containers to meet requirements tor scalability and availability The company prefers to focus on maintenance of the critical applications The company does not want to be responsible for provisioning and managing the underlying infrastructure that runs the containerized workload
What should a solutions architect do to meet those requirements?

A. Use Amazon EC2 Instances, and Install Docker on the Instances
B. Use Amazon Elastic Container Service (Amazon ECS) on Amazon EC2 worker nodes
C. Use Amazon Elastic Container Service (Amazon ECS) on AWS Fargate
D. Use Amazon EC2 instances from an Amazon Elastic Container Service (Amazon ECS)- op6mized Amazon Machine Image (AMI).

Answer: C

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

NEW QUESTION 9
- (Topic 1)
A company hosts an application on AWS Lambda functions mat are invoked by an Amazon API Gateway API The Lambda functions save customer data to an Amazon Aurora MySQL database Whenever the company upgrades the database, the Lambda functions fail to establish database connections until the upgrade is complete The result is that customer data Is not recorded for some of the event
A solutions architect needs to design a solution that stores customer data that is created during database upgrades
Which solution will meet these requirements?

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

Answer: D

Explanation:
https://www.learnaws.org/2020/12/13/aws-rds-proxy-deep-dive/
RDS proxy can improve application availability in such a situation by waiting for the new database instance to be functional and maintaining any requests received from the application during this time. The end result is that the application is more resilient to issues with the underlying database.
This will enable solution to hold data till the time DB comes back to normal. RDS proxy is to optimally utilize the connection between Lambda and DB. Lambda can open multiple connection concurrently which can be taxing on DB compute resources, hence RDS proxy was introduced to manage and leverage these connections efficiently.

NEW QUESTION 10
- (Topic 1)
A company runs an ecommerce application on Amazon EC2 instances behind an Application Load Balancer. The instances run in an Amazon EC2 Auto Scaling group across multiple Availability Zones. The Auto Scaling group scales based on CPU utilization metrics. The ecommerce application stores the transaction data in a MySQL 8.0 database that is hosted on a large EC2 instance.
The database's performance degrades quickly as application load increases. The application handles more read requests than write transactions. The company wants a solution that will automatically scale the database to meet the demand of unpredictable read workloads while maintaining high availability.
Which solution will meet these requirements?

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

Answer: C

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

NEW QUESTION 10
- (Topic 1)
A company wants to migrate an on-premises data center to AWS. The data canter hosts an SFTP server that stores its data on an NFS-based file system. The server holds 200 GB of data that needs to be transferred. The server must be hosted on an Amazon EC2 instance that uses an Amazon Elastic File System (Amazon EFS) file system
When combination of steps should a solutions architect take to automate this task? (Select TWO)

A. Launch the EC2 instance into the same Avalability Zone as the EFS fie system
B. install an AWS DataSync agent m the on-premises data center
C. Create a secondary Amazon Elastic Block Store (Amazon EBS) volume on the EC2instance tor the data
D. Manually use an operating system copy command to push the data to the EC2 instance
E. Use AWS DataSync to create a suitable location configuration for the onprermises SFTP server

Answer: BE

Explanation:
AWS DataSync is an online data movement and discovery service that simplifies data migration and helps users quickly, easily, and securely move their file or object data to, from, and between AWS storage services1. Users can use AWS DataSync to transfer data between on-premises and AWS storage services. To use AWS DataSync, users need to install an AWS DataSync agent in the on-premises data center. The agent is a software appliance that connects to the source or destination storage system and handles the data transfer to or from AWS over the network2. Users also need to use AWS DataSync to create a suitable location configuration for the on-premises SFTP server. A location is a logical representation of a storage system that contains files or objects that users want to transfer using DataSync. Users can create locations for NFS shares, SMB shares, HDFS file systems, self-managed object storage, Amazon S3 buckets, Amazon EFS file systems, Amazon FSx for Windows File Server file systems, Amazon FSx for Lustre file systems, Amazon FSx for OpenZFS file systems, Amazon FSx for NetApp ONTAP file systems, and AWS Snowcone devices3.

NEW QUESTION 15
- (Topic 1)
A company needs to keep user transaction data in an Amazon DynamoDB table. The company must retain the data for 7 years.
What is the MOST operationally efficient solution that meets these requirements?

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

Answer: C

NEW QUESTION 20
- (Topic 1)
An ecommerce company wants to launch a one-deal-a-day website on AWS. Each day will feature exactly one product on sale for a period of 24 hours. The company wants to be able to handle millions of requests each hour with millisecond latency during peak hours.
Which solution will meet these requirements with the LEAST operational overhead?

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

Answer: D

Explanation:
To launch a one-deal-a-day website on AWS with millisecond latency during peak hours and with the least operational overhead, the best option is to use an Amazon S3 bucket to host the website's static content, deploy an Amazon CloudFront distribution, set the S3 bucket as the origin, use Amazon API Gateway and AWS Lambda functions for the backend APIs, and store the data in Amazon DynamoDB. This option requires minimal operational overhead and can handle millions of requests each hour with millisecond latency during peak hours. Therefore, option D is the correct answer.
Reference: https://aws.amazon.com/blogs/compute/building-a-serverless-multi-player-game-with-aws-lambda-and-amazon-dynamodb/

NEW QUESTION 24
- (Topic 1)
A company is running an SMB file server in its data center. The file server stores large files that are accessed frequently for the first few days after the files are

created. After 7 days the files are rarely accessed.
The total data size is increasing and is close to the company's total storage capacity. A solutions architect must increase the company's available storage space without losing low-latency access to the most recently accessed files. The solutions architect must also provide file lifecycle management to avoid future storage issues.
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 extend 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 for Windows File Server file system to extend the company's storage space.
E. Install a utility on each user's computer to access Amazon S3. 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 hybrid cloud storage service that enables on- premises applications to seamlessly use Amazon S3 cloud storage. It provides a file interface to Amazon S3 and supports SMB and NFS protocols. It also supports S3 Lifecycle policies that can automatically transition data from S3 Standard to S3 Glacier Deep Archive after a specified period of time. This solution will meet the requirements of increasing the company's available storage space without losing low-latency access to the most recently accessed files and providing file lifecycle management to avoid future storage issues.
Reference:
https://docs.aws.amazon.com/storagegateway/latest/userguide/WhatIsStorageGateway.ht ml

NEW QUESTION 26
- (Topic 1)
A solutions architect is designing the cloud architecture for a new application being deployed on AWS. The process should run in parallel while adding and removing application nodes as needed based on the number of jobs to be processed. The processor application is stateless. The solutions architect must ensure that the application is loosely coupled and the job items are durably stored.
Which design should the solutions architect use?

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

Answer: C

Explanation:
"Create an Amazon SQS queue to hold the jobs that needs to be processed. Create an Amazon EC2 Auto Scaling group for the compute application. Set the scaling policy for the Auto Scaling group to add and remove nodes based on the number of items in the SQS queue"
In this case we need to find a durable and loosely coupled solution for storing jobs. Amazon SQS is ideal for this use case and can be configured to use dynamic scaling based on the number of jobs waiting in the queue.To configure this scaling you can use the backlog per instance metric with the target value being the acceptable backlog per instance to maintain. You can calculate these numbers as follows: Backlog per instance: To calculate your backlog per instance, start with the ApproximateNumberOfMessages queue attribute to determine the length of the SQS queue

NEW QUESTION 29
- (Topic 1)
A company collects temperature, humidity, and atmospheric pressure data in cities across multiple continents. The average volume of data collected per site each day is 500 GB. Each site has a high-speed internet connection. The company's weather forecasting applications are based in a single Region and analyze the data daily.
What is the FASTEST way to aggregate data from all of these global sites?

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

Answer: A

Explanation:
You might want to use Transfer Acceleration on a bucket for various reasons, including the following:
You have customers that upload to a centralized bucket from all over the world. You transfer gigabytes to terabytes of data on a regular basis across continents.
You are unable to utilize all of your available bandwidth over the Internet when uploading to Amazon S3.
https://docs.aws.amazon.com/AmazonS3/latest/dev/transfer-acceleration.html
https://aws.amazon.com/s3/transfer-acceleration/#:~:text=S3%20Transfer%20Acceleration%20(S3TA)%20reduces,to%20S3% 20for%20remote%20applications:
"Amazon S3 Transfer Acceleration can speed up content transfers to and from Amazon S3 by as much as 50-500% for long-distance transfer of larger objects. Customers who have either web or mobile applications with widespread users or applications hosted far away from their S3 bucket can experience long and variable upload and download speeds over the Internet"

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

NEW QUESTION 33
- (Topic 1)
A solutions architect must design a highly available infrastructure for a website. The website is powered by Windows web servers that run on Amazon EC2 instances. The solutions architect must implement a solution that can mitigate a large-scale DDoS attack that originates from thousands of IP addresses. Downtime is not acceptable for the website.
Which actions should the solutions architect take to protect the website from such an attack? (Select TWO.)

A. Use AWS Shield Advanced to stop the DDoS attack.
B. Configure Amazon GuardDuty to automatically block the attackers.
C. Configure the website to use Amazon CloudFront for both static and dynamic content.
D. Use an AWS Lambda function to automatically add attacker IP addresses to VPC network ACLs.
E. Use EC2 Spot Instances in an Auto Scaling group with a target tracking scaling policy that is set to 80% CPU utilization

Answer: AC

Explanation:
(https://aws.amazon.com/cloudfront

NEW QUESTION 36
- (Topic 1)
An Amazon EC2 administrator created the following policy associated with an IAM group containing several users

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

What is the effect of this policy?

A. Users can terminate an EC2 instance in any AWS Region except us-east-1.
B. Users can terminate an EC2 instance with the IP address 10 100 100 1 in the us-east-1 Region
C. Users can terminate an EC2 instance in the us-east-1 Region when the user's source IP is 10.100.100.254.
D. Users cannot terminate an EC2 instance in the us-east-1 Region when the user's source IP is 10.100 100 254

Answer: C

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

NEW QUESTION 40
- (Topic 1)
A solutions architect is designing a new hybrid architecture to extend a company s on- premises infrastructure to AWS The company requires a highly available connection with consistent low latency to an AWS Region. The company needs to minimize costs and is willing to accept slower traffic if the primary connection fails.
What should the solutions architect do to meet these requirements?

A. Provision an AWS Direct Connect connection to a Region Provision a VPN connection as a backup if the primary Direct Connect connection fails.

B. Provision a VPN tunnel connection to a Region for private connectivit
C. Provision a second VPN tunnel for private connectivity and as a backup if the primary VPN connection fails.
D. Provision an AWS Direct Connect connection to a Region Provision a second Direct Connect connection to the same Region as a backup if the primary Direct Connect connection fails.
E. Provision an AWS Direct Connect connection to a Region Use the Direct Connect failover attribute from the AWS CLI to automatically create a backup connection if the primary Direct Connect connection fails.

Answer: A

Explanation:
"In some cases, this connection alone is not enough. It is always better to guarantee a fallback connection as the backup of DX. There are several options, but implementing it with an AWS Site-To-Site VPN is a real cost-effective solution that can be exploited to reduce costs or, in the meantime, wait for the setup of a second DX." https://www.proud2becloud.com/hybrid-cloud-networking-backup-aws-direct-connect-network-connection-with-aws-site-to-site-vpn/

NEW QUESTION 45
- (Topic 1)
A company has more than 5 TB of file data on Windows file servers that run on premises Users and applications interact with the data each day
The company is moving its Windows workloads to AWS. As the company continues this process, the company requires access to AWS and on-premises file storage with minimum latency The company needs a solution that minimizes operational overhead and requires no significant changes to the existing file access patterns. The company uses an AWS Site-to-Site VPN connection for connectivity to AWS
What should a solutions architect do to meet these requirements?

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

Answer: D

Explanation:
https://docs.aws.amazon.com/filegateway/latest/filefsxw/what-is-file-fsxw.html
To meet the requirements of the company to have access to both AWS and on-premises file storage with minimum latency, a hybrid cloud architecture can be used. One solution is to deploy and configure Amazon FSx for Windows File Server on AWS, which provides fully managed Windows file servers. The on-premises file data can be moved to the FSx File Gateway, which can act as a bridge between on-premises and AWS file storage. The cloud workloads can be configured to use FSx for Windows File Server on AWS, while the on-premises workloads can be configured to use the FSx File Gateway. This solution minimizes operational overhead and requires no significant changes to the existing file access patterns. The connectivity between on-premises and AWS can be established using an AWS Site-to-Site VPN connection.
Reference:
AWS FSx for Windows File Server: https://aws.amazon.com/fsx/windows/ AWS FSx File Gateway: https://aws.amazon.com/fsx/file-gateway/
AWS Site-to-Site VPN: https://aws.amazon.com/vpn/site-to-site-vpn/

NEW QUESTION 46
- (Topic 1)
A company's dynamic website is hosted using on-premises servers in the United States. The company is launching its product in Europe, and it wants to optimize site loading times for new European users. The site's backend must remain in the United States. The product is being launched in a few days, and an immediate solution is needed.
What should the solutions architect recommend?

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

Answer: C

Explanation:
https://aws.amazon.com/pt/blogs/aws/amazon-cloudfront-support-for- custom-origins/
You can now create a CloudFront distribution using a custom origin. Each distribution will can point to an S3 or to a custom origin. This could be another storage service, or it could be something more interesting and more dynamic, such as an EC2 instance or even an Elastic Load Balancer

NEW QUESTION 48
- (Topic 1)
A company that hosts its web application on AWS wants to ensure all Amazon EC2 instances. Amazon RDS DB instances. and Amazon Redshift clusters are configured with tags. The company wants to minimize the effort of configuring and operating this check.
What should a solutions architect do to accomplish this?

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

Answer: A

Explanation:
To ensure all Amazon EC2 instances, Amazon RDS DB instances, and Amazon Redshift clusters are configured with tags, a solutions architect should use AWS Config rules to define and detect resources that are not properly tagged. AWS Config rules are a set of customizable rules that AWS Config uses to evaluate AWS resource configurations for compliance with best practices and company policies. Using AWS Config rules can minimize the effort of configuring and operating this check because it automates the process of identifying non-compliant resources and notifying the responsible teams. Reference:
AWS Config Developer Guide: AWS Config Rules (https://docs.aws.amazon.com/config/latest/developerguide/evaluate-config_use-managed- rules.html)

NEW QUESTION 52
- (Topic 1)
A company has several web servers that need to frequently access a common Amazon RDS MySQL Multi-AZ DB instance The company wants a secure method for the web servers to connect to the database while meeting a security requirement to rotate user credentials frequently.
Which solution meets these requirements?

A. Store the database user credentials in AWS Secrets Manager Grant the necessary IAM permissions to allow the web servers to access AWS Secrets Manager
B. Store the database user credentials in AWS Systems Manager OpsCenter Grant the necessary IAM permissions to allow the web servers to access OpsCenter
C. Store the database user credentials in a secure Amazon S3 bucket Grant the necessary IAM permissions to allow the web servers to retrieve credentials and access the databas
D. D.Store the database user credentials in files encrypted with AWS Key Management Service (AWS KMS) on the web server file syste
E. The web server should be able to decrypt the files and access the database

Answer: A

Explanation:
AWS Secrets Manager helps you protect secrets needed to access your applications, services, and IT resources. The service enables you to easily rotate, manage, and retrieve database credentials, API keys, and other secrets throughout their lifecycle.
https://docs.aws.amazon.com/secretsmanager/latest/userguide/intro.html
Secrets Manager enables you to replace hardcoded credentials in your code, including passwords, with an API call to Secrets Manager to retrieve the secret programmatically. This helps ensure the secret can't be compromised by someone examining your code, because the secret no longer exists in the code. Also, you can configure Secrets Manager to automatically rotate the secret for you according to a specified schedule. This enables you to replace long-term secrets with short-term ones, significantly reducing the risk of compromise.

NEW QUESTION 55
- (Topic 1)
A company recently signed a contract with an AWS Managed Service Provider (MSP) Partner for help with an application migration initiative. A solutions architect needs to share an Amazon Machine Image (AMI) from an existing AWS account with the MSP Partner's AWS account. The AMI is backed by Amazon Elastic Block Store (Amazon EBS) and uses a customer managed customer master key (CMK) to encrypt EBS volume snapshots.
What is the MOST secure way for the solutions architect to share the AMI with the MSP Partner's AWS account?

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

Answer: B

Explanation:
Share the existing KMS key with the MSP external account because it has already been used to encrypt the AMI snapshot.
https://docs.aws.amazon.com/kms/latest/developerguide/key-policy-modifying-external- accounts.html

NEW QUESTION 57
- (Topic 1)
A company recently migrated to AWS and wants to implement a solution to protect the traffic that flows in and out of the production VPC. The company had an inspection server in its on-premises data center. The inspection server performed specific operations such as traffic flow inspection and traffic filtering. The company wants to have the same functionalities in the AWS Cloud.
Which solution will meet these requirements?

A. Use Amazon GuardDuty for traffic inspection and traffic filtering in the production VPC
B. Use Traffic Mirroring to mirror traffic from the production VPC for traffic inspection and filtering.
C. Use AWS Network Firewall to create the required rules for traffic inspection and traffic filtering for the production VPC.
D. Use AWS Firewall Manager to create the required rules for traffic inspection and traffic filtering for the production VPC.

Answer: C

Explanation:
AWS Network Firewall supports both inspection and filtering as required

NEW QUESTION 60
- (Topic 1)
A solutions architect is developing a multiple-subnet VPC architecture. The solution will consist of six subnets in two Availability Zones. The subnets are defined as public, private and dedicated for databases. Only the Amazon EC2 instances running in the private subnets should be able to access a database.
Which solution meets these requirements?

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

Answer: C

Explanation:
Security groups are stateful. All inbound traffic is blocked by default. If you create an inbound rule allowing traffic in, that traffic is automatically allowed back out again. You cannot block specific IP address using Security groups (instead use Network Access Control Lists).
"You can specify allow rules, but not deny rules." "When you first create a security group, it has no inbound rules. Therefore, no inbound traffic originating from another host to your instance is allowed until you add inbound rules to the security group." Source:
https://docs.aws.amazon.com/vpc/latest/userguide/VPC_SecurityGroups.html#VPCSecurit yGroups

NEW QUESTION 62
- (Topic 1)
A company is storing backup files by using Amazon S3 Standard storage. The files are accessed frequently for 1 month. However, the files are not accessed after 1 month. The company must keep the files indefinitely.
Which storage solution will meet these requirements MOST cost-effectively?

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

Answer: B

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

NEW QUESTION 64
- (Topic 1)
A company has an automobile sales website that stores its listings in a database on Amazon RDS When an automobile is sold the listing needs to be removed from the website and the data must be sent to multiple target systems.
Which design should a solutions architect recommend?

A. Create an AWS Lambda function triggered when the database on Amazon RDS is updated to send the information to an Amazon Simple Queue Service (Amazon SQS> queue for the targets to consume
B. Create an AWS Lambda function triggered when the database on Amazon RDS is updated to send the information to an Amazon Simple Queue Service (Amazon SQS) FIFO queue for the targets to consume
C. Subscribe to an RDS event notification and send an Amazon Simple Queue Service (Amazon SQS) queue fanned out to multiple Amazon Simple Notification Service (Amazon SNS) topics Use AWS Lambda functions to update the targets
D. Subscribe to an RDS event notification and send an Amazon Simple Notification Service (Amazon SNS) topic fanned out to multiple Amazon Simple Queue Service (Amazon SQS) queues Use AWS Lambda functions to update the targets

Answer: D

Explanation:
https://docs.aws.amazon.com/lambda/latest/dg/services-rds.html https://docs.aws.amazon.com/lambda/latest/dg/with-sns.html

NEW QUESTION 65
- (Topic 1)
A company uses AWS Organizations to manage multiple AWS accounts for different departments. The management account has an Amazon S3 bucket that contains project reports. The company wants to limit access to this S3 bucket to only users of accounts within the organization in AWS Organizations.
Which solution meets these requirements with the LEAST amount of operational overhead?

A. Add the aws:PrincipalOrgID global condition key with a reference to the organization ID to the S3 bucket policy.
B. Create an organizational unit (OU) for each departmen
C. Add the aws:PrincipalOrgPaths global condition key to the S3 bucket policy.
D. Use AWS CloudTrail to monitor the CreateAccount, InviteAccountToOrganization, LeaveOrganization, and RemoveAccountFromOrganization event
E. Update the S3 bucket policy accordingly.
F. Tag each user that needs access to the S3 bucke
G. Add the aws:PrincipalTag global condition key to the S3 bucket policy.

Answer: A

Explanation:
https://aws.amazon.com/blogs/security/control-access-to-aws-resources-by-using-the-aws-organization-of-iam-principals/
The aws:PrincipalOrgID global key provides an alternative to listing all the account IDs for all AWS accounts in an organization. For example, the following Amazon S3 bucket policy allows members of any account in the XXX organization to add an object into the
examtopics bucket.
{"Version": "2020-09-10",

"Statement": {
"Sid": "AllowPutObject", "Effect": "Allow",
"Principal": "*",
"Action": "s3:PutObject",
"Resource": "arn:aws:s3:::examtopics/*", "Condition": {"StringEquals":
{"aws:PrincipalOrgID":["XXX"]}}}}
https://docs.aws.amazon.com/IAM/latest/UserGuide/reference_policies_condition- keys.html

NEW QUESTION 69
- (Topic 2)
A company wants to direct its users to a backup static error page if the company's primary website is unavailable. The primary website's DNS records are hosted in Amazon Route 53. The domain is pointing to an Application Load Balancer (ALB). The company needs a solution that minimizes changes and infrastructure overhead.
Which solution will meet these requirements?

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

Answer: B

Explanation:
This solution meets the requirements of directing users to a backup static error page if the primary website is unavailable, minimizing changes and infrastructure overhead. Route 53 active-passive failover configuration can route traffic to a primary resource when it is healthy or to a secondary resource when the primary resource is unhealthy. Route 53 health checks can monitor the health of the ALB endpoint and trigger the failover when needed. The static error page can be hosted in an S3 bucket that is configured as a website, which is a simple and cost-effective way to serve static content.
Option A is incorrect because using a latency routing policy can route traffic based on the lowest network latency for users, but it does not provide failover functionality. Option C is incorrect because using an active-active configuration with the ALB and an EC2 instance can increase the infrastructure overhead and complexity, and it does not guarantee that the EC2 instance will always be healthy. Option D is incorrect because using a multivalue answer routing policy can return multiple values for a query, but it does not provide failover functionality.
References:
? https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/routing-policy- failover.html
? https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/dns-failover.html
? https://docs.aws.amazon.com/AmazonS3/latest/userguide/WebsiteHosting.html

NEW QUESTION 70
- (Topic 2)
An ecommerce company hosts its analytics application in the AWS Cloud. The application generates about 300 MB of data each month. The data is stored in JSON format. The company is evaluating a disaster recovery solution to back up the data. The data must be accessible in milliseconds if it is needed, and the data must be kept for 30 days.
Which solution meets these requirements MOST cost-effectively?

A. Amazon OpenSearch Service (Amazon Elasticsearch Service)
B. Amazon S3 Glacier
C. Amazon S3 Standard
D. Amazon RDS for PostgreSQL

Answer: C

Explanation:
This solution meets the requirements of a disaster recovery solution to back up the data that is generated by an analytics application, stored in JSON format, and must be accessible in milliseconds if it is needed. Amazon S3 Standard is a durable and scalable storage class for frequently accessed data. It can store any amount of data and provide high availability and performance. It can also support millisecond access time for data retrieval.
Option A is incorrect because Amazon OpenSearch Service (Amazon Elasticsearch Service) is a search and analytics service that can index and query data, but it is not a backup solution for data stored in JSON format. Option B is incorrect because Amazon S3 Glacier is a low-cost storage class for data archiving and long-term backup, but it does not support millisecond access time for data retrieval. Option D is incorrect because Amazon RDS for PostgreSQL is a relational database service that can store and query structured data, but it is not a backup solution for data stored in JSON format.
References:
? https://aws.amazon.com/s3/storage-classes/
? https://aws.amazon.com/s3/faqs/#Durability_and_data_protection

NEW QUESTION 74
- (Topic 2)
A company is migrating its on-premises PostgreSQL database to Amazon Aurora PostgreSQL. The on-premises database must remain online and accessible during the migration. The Aurora database must remain synchronized with the on-premises database.
Which combination of actions must a solutions architect take to meet these requirements? (Choose two.)

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

Answer: AC

Explanation:
AWS Database Migration Service supports homogeneous migrations such as Oracle to Oracle, as well as heterogeneous migrations between different database platforms, such as Oracle or Microsoft SQL Server to Amazon Aurora. With AWS Database Migration Service, you can also continuously replicate data with low latency from any supported source to any supported target. For example, you can replicate from multiple sources to Amazon Simple Storage Service (Amazon S3) to build a highly available and scalable data lake solution. You can also consolidate databases into a petabyte-scale data warehouse by streaming data to Amazon Redshift. Learn more about the supported source and target databases. https://aws.amazon.com/dms/

NEW QUESTION 79
- (Topic 2)
A company is building a web-based application running on Amazon EC2 instances in multiple Availability Zones. The web application will provide access to a repository of text documents totaling about 900 TB in size. The company anticipates that the web application will experience periods of high demand. A solutions architect must ensure that the storage component for the text documents can scale to meet the demand of the application at all times. The company is concerned about the overall cost of the solution.
Which storage solution meets these requirements MOST cost-effectively?

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

Answer: D

Explanation:
Amazon S3 is cheapest and can be accessed from anywhere.

NEW QUESTION 84
- (Topic 2)
A company is concerned about the security of its public web application due to recent web attacks. The application uses an Application Load Balancer (ALB). A solutions architect must reduce the risk of DDoS attacks against the application.
What should the solutions architect do to meet this requirement?

A. Add an Amazon Inspector agent to the ALB.
B. Configure Amazon Macie to prevent attacks.
C. Enable AWS Shield Advanced to prevent attacks.
D. Configure Amazon GuardDuty to monitor the ALB.

Answer: C

Explanation:
AWS Shield Advanced provides expanded DDoS attack protection for your Amazon EC2 instances, Elastic Load Balancing load balancers, CloudFront distributions, Route 53 hosted zones, and AWS Global Accelerator standard accelerators. https://docs.aws.amazon.com/waf/latest/developerguide/what-is-aws-waf.html

NEW QUESTION 89
- (Topic 2)
A company is running an online transaction processing (OLTP) workload on AWS. This workload uses an unencrypted Amazon RDS DB instance in a Multi-AZ deployment. Daily database snapshots are taken from this instance.
What should a solutions architect do to ensure the database and snapshots are always encrypted moving forward?

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

Answer: A

Explanation:
https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_RestoreFromSnapsho t.html#USER_RestoreFromSnapshot.CON
Under "Encrypt unencrypted resources" - https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSEncryption.html

NEW QUESTION 91
- (Topic 2)
A company is planning to build a high performance computing (HPC) workload as a service solution that Is hosted on AWS A group of 16 AmazonEC2Ltnux Instances requires the lowest possible latency for node-to-node communication. The instances also need a shared block device volume for high-performing storage.
Which solution will meet these requirements?

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

Answer: A

Explanation:
1. lowest possible latency + node to node ==> cluster placement(must be within one AZ), so C, D out
* 2. For EBS Multi-Attach, up to 16 instances can be attached to a single volume==>we have 16 linux instance==>more close to A
* 3. "need a shared block device volume"==>EBS Multi-attach is Block Storage whereas EFS is File Storage==> B out
* 4. EFS automatically replicates data within and across 3 AZ==>we use cluster placement
so all EC2 are within one AZ.
* 5. EBS Multi-attach volumes can be used for clients within a single AZ. https://repost.aws/questions/QUK2RANw1QTKCwpDUwCCI72A/efs-vs-ebs-mult-attach

NEW QUESTION 94
- (Topic 2)
A solutions architect is creating a new Amazon CloudFront distribution for an application. Some of the information submitted by users is sensitive. The application uses HTTPS but needs another layer of security. The sensitive information should be protected throughout the entire application stack, and access to the information should be restricted to certain applications.
Which action should the solutions architect take?

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

Answer: C

Explanation:
https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/field-level- encryption.html
"With Amazon CloudFront, you can enforce secure end-to-end connections to origin servers by using HTTPS. Field-level encryption adds an additional layer of security that lets you protect specific data throughout system processing so that only certain applications can see it."

NEW QUESTION 97
- (Topic 2)
A company runs a web-based portal that provides users with global breaking news, local alerts, and weather updates. The portal delivers each user a personalized view by using mixture of static and dynamic content. Content is served over HTTPS through an API server running on an Amazon EC2 instance behind an Application Load Balancer (ALB). The company wants the portal to provide this content to its users across the world as quickly as possible.
How should a solutions architect design the application to ensure the LEAST amount of latency for all users?

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

Answer: A

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

NEW QUESTION 99
- (Topic 2)
An ecommerce company has an order-processing application that uses Amazon API Gateway and an AWS Lambda function. The application stores data in an Amazon Aurora PostgreSQL database. During a recent sales event, a sudden surge in customer orders occurred. Some customers experienced timeouts and the application did not process the orders of those customers A solutions architect determined that the CPU utilization and memory utilization were high on the database because of a large number of open connections The solutions architect needs to prevent the timeout errors while making the least possible changes to the application.
Which solution will meet these requirements?

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

Answer: B

Explanation:
Many applications, including those built on modern serverless architectures, can have a large number of open connections to the database server and may open and close database connections at a high rate, exhausting database memory and compute resources. Amazon RDS Proxy allows applications to pool and share connections established with the database, improving database efficiency and application scalability. https://aws.amazon.com/id/rds/proxy/

NEW QUESTION 102
- (Topic 2)
A solutions architect is optimizing a website for an upcoming musical event. Videos of the performances will be streamed in real time and then will be available on demand. The event is expected to attract a global online audience.
Which service will improve the performance of both the real-lime and on-demand streaming?

A. Amazon CloudFront
B. AWS Global Accelerator
C. Amazon Route 53
D. Amazon S3 Transfer Acceleration

Answer: A

Explanation:
You can use CloudFront to deliver video on demand (VOD) or live streaming video using any HTTP origin. One way you can set up video workflows in the cloud is by using CloudFront together with AWS Media Services. https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/on-demand- streaming-video.html

NEW QUESTION 104
- (Topic 2)
A company owns an asynchronous API that is used to ingest user requests and, based on the request type, dispatch requests to the appropriate microservice for processing. The company is using Amazon API Gateway to deploy the API front end, and an AWS Lambda function that invokes Amazon DynamoDB to store user requests before dispatching them to the processing microservices.
The company provisioned as much DynamoDB throughput as its budget allows, but the company is still experiencing availability issues and is losing user requests.
What should a solutions architect do to address this issue without impacting existing users?

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

Answer: D

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

NEW QUESTION 109
- (Topic 2)
A company uses AWS Organizations to create dedicated AWS accounts for each business unit to manage each business unit's account independently upon request. The root email recipient missed a notification that was sent to the root user email address of one account. The company wants to ensure that all future notifications are not missed. Future notifications must be limited to account administrators.
Which solution will meet these requirements?

A. Configure the company's email server to forward notification email messages that are sent to the AWS account root user email address to all users in the organization.
B. Configure all AWS account root user email addresses as distribution lists that go to a few administrators who can respond to alert
C. Configure AWS account alternate contacts in the AWS Organizations console or programmatically.
D. Configure all AWS account root user email messages to be sent to one administrator who is responsible for monitoring alerts and forwarding those alerts to the appropriate groups.
E. Configure all existing AWS accounts and all newly created accounts to use the same root user email addres
F. Configure AWS account alternate contacts in the AWS Organizations console or programmatically.

Answer: B

Explanation:
Use a group email address for the management account's root user https://docs.aws.amazon.com/organizations/latest/userguide/orgs_best-practices_mgmt-acct.html#best-practices_mgmt-acct_email-address

NEW QUESTION 114
- (Topic 2)
A company's web application is running on Amazon EC2 instances behind an Application Load Balancer. The company recently changed its policy, which now requires the application to be accessed from one specific country only.
Which configuration will meet this requirement?

A. Configure the security group for the EC2 instances.
B. Configure the security group on the Application Load Balancer.
C. Configure AWS WAF on the Application Load Balancer in a VPC.
D. Configure the network ACL for the subnet that contains the EC2 instances.

Answer: C

Explanation:
https://aws.amazon.com/about-aws/whats-new/2017/10/aws-waf-now-supports- geographic-match/

NEW QUESTION 116
- (Topic 2)
Organizers for a global event want to put daily reports online as static HTML pages. The pages are expected to generate millions of views from users around the world. The files are stored In an Amazon S3 bucket. A solutions architect has been asked to design an efficient and effective solution.
Which action should the solutions architect take to accomplish this?

A. Generate presigned URLs for the files.

B. Use cross-Region replication to all Regions.
C. Use the geoproximtty feature of Amazon Route 53.
D. Use Amazon CloudFront with the S3 bucket as its origin.

Answer: D

Explanation:
Amazon CloudFront is a content delivery network (CDN) that speeds up the delivery of static and dynamic web content, such as HTML pages, images, and videos. By using CloudFront, the HTML pages will be served to users from the edge location that is closest to them, resulting in faster delivery and a better user experience. CloudFront can also handle the high traffic and large number of requests expected for the global event, ensuring that the HTML pages are available and accessible to users around the world.

NEW QUESTION 117
- (Topic 2)
A solutions architect is designing a customer-facing application for a company. The application's database will have a clearly defined access pattern throughout the year and will have a variable number of reads and writes that depend on the time of year. The company must retain audit records for the database for 7 days. The recovery point objective (RPO) must be less than 5 hours.
Which solution meets these requirements?

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

Answer: A

Explanation:
This solution meets the requirements of a customer-facing application that has a clearly defined access pattern throughout the year and a variable number of reads and writes that depend on the time of year. Amazon DynamoDB is a fully managed NoSQL database service that can handle any level of request traffic and data size. DynamoDB auto scaling can automatically adjust the provisioned read and write capacity based on the actual workload. DynamoDB on-demand backups can create full backups of the tables for data protection and archival purposes. DynamoDB Streams can capture a time-ordered sequence of item-level modifications in the tables for audit purposes.
Option B is incorrect because Amazon Redshift is a data warehouse service that is designed for analytical workloads, not for customer-facing applications. Option C is incorrect because Amazon RDS with Provisioned IOPS can provide consistent performance for relational databases, but it may not be able to handle unpredictable spikes in traffic and data size. Option D is incorrect because Amazon Aurora MySQL with auto scaling can provide high performance and availability for relational databases, but it does not support audit logging as a parameter.
References:
? https://aws.amazon.com/dynamodb/
? https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/AutoScalin g.html
? https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/BackupRe store.html
? https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Streams.ht ml

NEW QUESTION 121
- (Topic 2)
A company recently started using Amazon Aurora as the data store for its global ecommerce application When large reports are run developers report that the ecommerce application is performing poorly After reviewing metrics in Amazon CloudWatch, a solutions architect finds that the ReadlOPS and CPUUtilization metrics are spiking when monthly reports run.
What is the MOST cost-effective solution?

A. Migrate the monthly reporting to Amazon Redshift.
B. Migrate the monthly reporting to an Aurora Replica
C. Migrate the Aurora database to a larger instance class
D. Increase the Provisioned IOPS on the Aurora instance

Answer: B

Explanation:
https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/Aurora.Replication.htm l
#Aurora.Replication.Replicas Aurora Replicas have two main purposes. You can issue queries to them to scale the read operations for your application. You typically do so by connecting to the reader endpoint of the cluster. That way, Aurora can spread the load for read-only connections across as many Aurora Replicas as you have in the cluster. Aurora Replicas also help to increase availability. If the writer instance in a cluster becomes unavailable, Aurora automatically promotes one of the reader instances to take its place as the new writer. https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/Aurora.Overview.html

NEW QUESTION 126
- (Topic 2)
A company's website provides users with downloadable historical performance reports. The website needs a solution that will scale to meet the company's website demands globally. The solution should be cost-effective, limit the provisioning of infrastructure resources, and provide the fastest possible response time.
Which combination should a solutions architect recommend to meet these requirements?

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

Answer: A

Explanation:
Cloudfront for rapid response and s3 to minimize infrastructure.

NEW QUESTION 128
- (Topic 2)
A company is migrating an application from on-premises servers to Amazon EC2 instances. As part of the migration design requirements, a solutions architect must implement infrastructure metric alarms. The company does not need to take action if CPU utilization increases to more than 50% for a short burst of time. However, if the CPU
utilization increases to more than 50% and read IOPS on the disk are high at the same time, the company needs to act as soon as possible. The solutions architect also must reduce false alarms.
What should the solutions architect do to meet these requirements?

A. Create Amazon CloudWatch composite alarms where possible.
B. Create Amazon CloudWatch dashboards to visualize the metrics and react to issues quickly.
C. Create Amazon CloudWatch Synthetics canaries to monitor the application and raise an alarm.
D. Create single Amazon CloudWatch metric alarms with multiple metric thresholds where possible.

Answer: A

Explanation:
Composite alarms determine their states by monitoring the states of other alarms. You can **use composite alarms to reduce alarm noise**. For example, you can create a composite alarm where the underlying metric alarms go into ALARM when they meet specific conditions. You then can set up your composite alarm to go into ALARM and send you notifications when the underlying metric alarms go into ALARM by configuring the underlying metric alarms never to take actions. Currently, composite alarms can take the following actions: https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/Create_Composite_Al arm.html

NEW QUESTION 132
- (Topic 3)
A company is migrating an old application to AWS The application runs a batch job every hour and is CPU intensive The batch job takes 15 minutes on average with an on-premises server The server has 64 virtual CPU (vCPU) and 512 GiB of memory
Which solution will run the batch job within 15 minutes with the LEAST operational overhead?

A. Use AWS Lambda with functional scaling
B. Use Amazon Elastic Container Service (Amazon ECS) with AWS Fargate
C. Use Amazon Lightsail with AWS Auto Scaling
D. Use AWS Batch on Amazon EC2

Answer: D

Explanation:
Use AWS Batch on Amazon EC2. AWS Batch is a fully managed batch processing service that can be used to easily run batch jobs on Amazon EC2 instances. It can scale the number of instances to match the workload, allowing the batch job to be completed in the desired time frame with minimal operational overhead.
Using AWS Lambda with Amazon API Gateway - AWS Lambda https://docs.aws.amazon.com/lambda/latest/dg/services-apigateway.html
AWS Lambda FAQs https://aws.amazon.com/lambda/faqs/

NEW QUESTION 133
- (Topic 3)
A media company hosts its website on AWS. The website application's architecture includes a fleet of Amazon EC2 instances behind an Application Load Balancer (ALB) and a database that is hosted on Amazon Aurora The company's cyber security teem reports that the application is vulnerable to SOL injection.
How should the company resolve this issue?

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

Answer: A

Explanation:
https://aws.amazon.com/premiumsupport/knowledge-center/waf-block-common-
attacks/#:~:text=To%20protect%20your%20applications%20against,%2C%20query%20stri
ng%2C%20or%20URI. ----------
---------- Protect against SQL injection and cross-site scripting To protect your applications against SQL injection and cross-site scripting (XSS) attacks, use the built- in SQL injection and cross-site scripting engines. Remember that attacks can be performed on different parts of the HTTP request, such as the HTTP header, query string, or URI. Configure the AWS WAF rules to inspect different parts of the HTTP request against the built-in mitigation engines.

NEW QUESTION 136
- (Topic 3)
A company is running a multi-tier recommence web application in the AWS Cloud. The application runs on Amazon EC2 instances with an Amazon RDS for MySQL Multi-AZ OB instance. Amazon ROS is configured with the latest generation DB instance with 2.000 GB of storage In a General Purpose SSD (gp3) Amazon Elastic Block Store (Amazon EBSl volume. The database performance affects the application during periods high demand.
A database administrator analyzes the logs in Amazon CloudWatch Logs and discovers that the application performance always degrades when the number of read and write IOPS is higher than 20.000.
What should a solutions architect do to improve the application performance?

A. Replace the volume with a magnetic volume.
B. Increase the number of IOPS on the gp3 volume.
C. Replace the volume with a Provisioned IOPS SSD (Io2) volume.
D. Replace the 2.000 GB gp3 volume with two 1.000 GB gp3 volumes

Answer: C

Explanation:
https://aws.amazon.com/ebs/features/ Amazon EBS provides a range of options that allow you to optimize storage performance and cost for your workload. These options are divided into two major categories: SSD-backed storage for transactional workloads, such as databases and boot volumes (performance depends primarily on IOPS), and HDD-backed storage for throughput intensive workloads, such as MapReduce and log processing (performance depends primarily on MB/s).

NEW QUESTION 138
- (Topic 3)
A company will deployed a web application on AWS. The company hosts the backend database on Amazon RDS for MySQL with a primary DB instance and five read replicas to support scaling needs. The read replicas must log no more than 1 second bahind the primary DB Instance. The database routinely runs scheduled stored procedures.
As traffic on the website increases, the replicas experinces addtional lag during periods of peak lead. A solutions architect must reduce the replication lag as much as possible. The solutions architect must minimize changes to the applicatin code and must minimize ongoing overhead.
Which solution will meet these requirements?
Migrate the database to Amazon Aurora MySQL. Replace the read replicas with Aurora Replicas, and configure Aurora Auto Scaling. Replace the stored procedures with Aurora
MySQL native functions.
Deploy an Amazon ElasticCache for Redis cluser in front of the database. Modify the application to check the cache before the application queries the database. Repace the stored procedures with AWS Lambda funcions.

A. Migrate the database to a MYSQL database that runs on Amazn EC2 instance
B. Choose large, compute optimized for all replica node
C. Maintain the stored procedures on the EC2 instances.
D. Deploy an Amazon ElastiCache for Redis cluster in fornt of the databas
E. Modify the application to check the cache before the application queries the databas
F. Replace the stored procedures with AWS Lambda functions.
G. Migrate the database to a MySQL database that runs on Amazon EC2 instance
H. Choose large, compute optimized EC2 instances for all replica nodes, Maintain the stored procedures on the EC2 instances.
I. Migrate the database to Amazon DynamoDB, Provision number of read capacity units (RCUs) to support the required throughput, and configure on-demand capacity scalin
J. Replace the stored procedures with DynamoDB streams.

Answer: A

Explanation:
Option A is the most appropriate solution for reducing replication lag without significant changes to the application code and minimizing ongoing operational overhead. Migrating the database to Amazon Aurora MySQL allows for improved replication performance and higher scalability compared to Amazon RDS for MySQL. Aurora Replicas provide faster replication, reducing the replication lag, and Aurora Auto Scaling ensures that there are enough Aurora Replicas to handle the incoming traffic. Additionally, Aurora MySQL native functions can replace the stored procedures, reducing the load on the database and improving performance.

NEW QUESTION 142
- (Topic 3)
A gaming company is moving its public scoreboard from a data center to the AWS Cloud. The company uses Amazon EC2 Windows Server instances behind an Application Load Balancer to host its dynamic application. The company needs a highly available storage solution for the application. The application consists of static files and dynamic server-side code.
Which combination of steps should a solutions architect take to meet these requirements? (Select TWO.)

A. Store the static files on Amazon S3. Use Amazon CloudFront to cache objects at the edge.
B. Store the static files on Amazon S3. Use Amazon ElastiCache to cache objects at the edge.
C. Store the server-side code on Amazon Elastic File System (Amazon EFS). Mount the EFS volume on each EC2 instance to share the files.
D. Store the server-side code on Amazon FSx for Windows File Serve
E. Mount the FSx for Windows File Server volume on each EC2 instance to share the files.
F. Store the server-side code on a General Purpose SSD (gp2) Amazon Elastic Block Store (Amazon EBS) volum
G. Mount the EBS volume on each EC2 instance to share the files.

Answer: AD

Explanation:
A because Elasticache, despite being ideal for leaderboards per Amazon, doesn't cache at edge locations. D because FSx has higher performance for low latency needs. https://www.techtarget.com/searchaws/tip/Amazon-FSx-vs-EFS-Compare-the-AWS-file- services "FSx is built for high performance and submillisecond latency using solid-state drive storage volumes. This design enables users to select storage capacity and latency independently. Thus, even a subterabyte file system can have 256 Mbps or higher throughput and support volumes up to 64 TB."
Amazon S3 is an object storage service that can store static files such as images, videos, documents, etc. Amazon EFS is a file storage service that can store files in a hierarchical structure and supports NFS protocol. Amazon FSx for Windows File Server is a file storage service that can store files in a hierarchical structure and supports SMB protocol. Amazon EBS is a block storage service that can store data in fixed-size blocks and attach to EC2 instances.
Based on these definitions, the combination of steps that should be taken to meet the requirements are:
* A. Store the static files on Amazon S3. Use Amazon CloudFront to cache objects at the edge. D. Store the server-side code on Amazon FSx for Windows File Server. Mount the FSx for Windows File Server volume on each EC2 instance to share the files.

NEW QUESTION 146
- (Topic 3)
A telemarketing company is designing its customer call center functionality on AWS. The company needs a solution that provides multiples speaker recognition and generates transcript files The company wants to query the transcript files to analyze the business patterns The transcript files must be stored for 7 years for auditing piloses.
Which solution will meet these requirements?

A. Use Amazon Recognition for multiple speaker recognitio

B. Store the transcript files in Amazon S3 Use machine teaming models for transcript file analysis
C. Use Amazon Transcribe for multiple speaker recognitio
D. Use Amazon Athena for transcript file analysts
E. Use Amazon Translate lor multiple speaker recognitio
F. Store the transcript files in Amazon Redshift Use SQL queues lor transcript file analysis
G. Use Amazon Recognition for multiple speaker recognitio
H. Store the transcript files in Amazon S3 Use Amazon Textract for transcript file analysis

Answer: B

Explanation:
Amazon Transcribe now supports speaker labeling for streaming transcription. Amazon Transcribe is an automatic speech recognition (ASR) service that makes it easy for you to convert speech-to-text. In live audio transcription, each stream of audio may contain multiple speakers. Now you can conveniently turn on the ability to label speakers, thus helping to identify who is saying what in the output transcript. https://aws.amazon.com/about-aws/whats-new/2020/08/amazon-transcribe-supports- speaker-labeling-streaming-transcription/

NEW QUESTION 150
- (Topic 3)
A company wants to run an in-memory database for a latency-sensitive application that runs on Amazon EC2 instances. The application processes more than 100,000 transactions each minute and requires high network throughput. A solutions architect needs to provide a cost-effective network design that minimizes data transfer charges.
Which solution meets these requirements?

A. Launch all EC2 instances in the same Availability Zone within the same AWS Regio
B. Specify a placement group with cluster strategy when launching EC2 instances.
C. Launch all EC2 instances in different Availability Zones within the same AWS Regio
D. Specify a placement group with partition strategy when launching EC2 instances.
E. Deploy an Auto Scaling group to launch EC2 instances in different Availability Zones based on a network utilization target.
F. Deploy an Auto Scaling group with a step scaling policy to launch EC2 instances in different Availability Zones.

Answer: A

Explanation:
• Launching instances within a single AZ and using a cluster placement group provides the lowest network latency and highest bandwidth between instances. This maximizes performance for an in-memory database and high-throughput application.
• Communications between instances in the same AZ and placement group are free, minimizing data transfer charges. Inter-AZ and public IP traffic can incur charges.
• A cluster placement group enables the instances to be placed close together within the
AZ, allowing the high network throughput required. Partition groups span AZs, reducing bandwidth.
• Auto Scaling across zones could launch instances in AZs that increase data transfer charges. It may reduce network throughput, impacting performance.

NEW QUESTION 154
- (Topic 3)
An Amazon EC2 instance is located in a private subnet in a new VPC. This subnet does not have outbound internet access, but the EC2 instance needs the ability to download monthly security updates from an outside vendor.
What should a solutions architect do to meet these requirements?

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

Answer: B

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

NEW QUESTION 158
- (Topic 3)
A developer has an application that uses an AWS Lambda function to upload files to Amazon S3 and needs the required permissions to perform the task The developer already has an IAM user with valid IAM credentials required for Amazon S3
What should a solutions architect do to grant the permissions?

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

Answer: D

Explanation:
To grant the necessary permissions to an AWS Lambda function to upload files to Amazon S3, a solutions architect should create an IAM execution role with the

required permissions and attach the IAM role to the Lambda function. This approach follows the principle of least privilege and ensures that the Lambda function can only access the resources it needs to perform its specific task.

NEW QUESTION 162
- (Topic 3)
A company is experiencing sudden increases in demand. The company needs to provision large Amazon EC2 instances from an Amazon Machine image (AMI) The instances will run m an Auto Scaling group. The company needs a solution that provides minimum initialization latency to meet the demand.
Which solution meets these requirements?

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

Answer: B

Explanation:
Enabling Amazon Elastic Block Store (Amazon EBS) fast snapshot restore on a snapshot allows you to quickly create a new Amazon Machine Image (AMI) from a snapshot, which can help reduce the initialization latency when provisioning new instances. Once the AMI is provisioned, you can replace the AMI in the Auto Scaling group with the new AMI. This will ensure that new instances are launched from the updated AMI and are able to meet the increased demand quickly.

NEW QUESTION 164
- (Topic 3)
A transaction processing company has weekly scripted batch jobs that run on Amazon EC2 instances. The EC2 instances are in an Auto Scaling group. The number of transactions can vary but the beseline CPU utilization that is noted on each run is at least 60%. The company needs to provision the capacity 30 minutes before the jobs run.
Currently engineering complete this task by manually modifying the Auto Scaling group parameters. The company does not have the resources to analyze the required capacity trends for the Auto Scaling group counts. The company needs an automated way to modify the Auto Scaling group's capacity.
Which solution will meet these requiements with the LEAST operational overhead?

A. Ceate a dynamic scalling policy for the Auto Scaling grou
B. Configure the policy to scale based on the CPU utilization metric to 60%.
C. Create a scheduled scaling polcy for the Auto Scaling grou
D. Set the appropriate desired capacity, minimum capacity, and maximum capacit
E. Set the recurrence to weekl
F. Set the start time to 30 minute
G. Before the batch jobs run.
H. Create a predictive scaling policy for the Auto Scaling grou
I. Configure the policy to scale based on forecas
J. Set the scaling metric to CPU utilizatio
K. Set the target value for the metric to 60%. In the Policy, set the instances to pre-launch 30 minutes before the jobs run.
L. Create an Amazon EventBridge event to invoke an AWS Lamda function when the CPU utilization metric value for the Auto Scaling group reaches 60%. Configure the Lambda function to increase the Auto Scaling group's desired capacity and maximum capacity by 20%.

Answer: C

Explanation:
This option is the most efficient because it uses a predictive scaling policy for the Auto Scaling group, which is a type of scaling policy that uses machine learning to predict capacity requirements based on historical data from CloudWatch1. It also configures the policy to scale based on forecast, which enables the Auto Scaling group to adjust its capacity in advance of traffic changes. It also sets the scaling metric to CPU utilization and the target value for the metric to 60%, which aligns with the baseline CPU utilization that is noted on each run. It also sets the instances to pre-launch 30 minutes before the jobs run, which ensures that enough capacity is provisioned before the weekly scripted batch jobs start. This solution meets the requirement of provisioning the capacity 30 minutes before the jobs run with the least operational overhead.
Option A is less efficient because it uses a dynamic scaling policy for the Auto Scaling group, which is a type of scaling policy that adjusts your Auto Scaling group's capacity in response to changing demand2. However, this does not provide a way to provision the capacity 30 minutes before the jobs run, as it only reacts to changing traffic. Option B is less efficient because it uses a scheduled scaling policy for the Auto Scaling group, which is a type of scaling policy that lets you scale your Auto Scaling group based on a schedule that you create3. However, this does not provide a way to scale based on forecast or CPU utilization, as it only scales based on predefined metrics and policies. Option D is less efficient because it uses an Amazon EventBridge event to invoke an AWS Lambda function when the CPU utilization metric value for the Auto Scaling group reaches 60%, which is a way to trigger serverless functions based on events. However, this does not provide a way to provision the capacity 30 minutes before the jobs run, as it only reacts to changing traffic.

NEW QUESTION 169
- (Topic 3)
A company hosts its application on AWS The company uses Amazon Cognito to manage users When users log in to the application the application fetches required data from Amazon DynamoDB by using a REST API that is hosted in Amazon API Gateway. The company wants an AWS managed solution that will control access to the REST API to reduce development efforts
Which solution will meet these requirements with the LEAST operational overhead?

A. Configure an AWS Lambda function to be an authorize! in API Gateway to validate which user made the request
B. For each user, create and assign an API key that must be sent with each request Validate the key by using an AWS Lambda function
C. Send the user's email address in the header with every request Invoke an AWS Lambda function to validate that the user with that email address has proper access
D. Configure an Amazon Cognito user pool authorizer in API Gateway to allow Amazon Cognito to validate each request

Answer: D

Explanation:

https://docs.aws.amazon.com/apigateway/latest/developerguide/apigateway-integrate-with-cognito.html
To control access to the REST API and reduce development efforts, the company can use an Amazon Cognito user pool authorizer in API Gateway. This will allow Amazon Cognito to validate each request and ensure that only authenticated users can access the API. This
solution has the LEAST operational overhead, as it does not require the company to develop and maintain any additional infrastructure or code.

NEW QUESTION 172
- (Topic 3)
A company wants to restrict access to the content of one of its man web applications and to protect the content by using authorization techniques available on AWS. The company wants to implement a serverless architecture end an authentication solution for fewer tian 100 users. The solution needs to integrate with the main web application and serve web content globally. The solution must also scale as to company's user base grows while providing lowest login latency possible.

A. Use Amazon Cognito tor authenticatio
B. Use Lambda#Edge tor authorization Use Amazon CloudFront 10 serve the web application globally
C. Use AWS Directory Service for Microsoft Active Directory tor authentication Use AWS Lambda for authorization Use an Application Load Balancer to serve the web application globally
D. Usa Amazon Cognito for authentication Use AWS Lambda tor authorization Use Amazon S3 Transfer Acceleration 10 serve the web application globally.
E. Use AWS Directory Service for Microsoft Active Directory for authentication Use Lambda@Edge for authorization Use AWS Elastic Beanstalk to serve the web application.

Answer: A

Explanation:
https://aws.amazon.com/blogs/networking-and-content-delivery/adding-http- security-headers-using-lambdaedge-and-amazon-cloudfront/
Amazon CloudFront is a global content delivery network (CDN) service that can securely deliver web content, videos, and APIs at scale. It integrates with Cognito for authentication and with Lambda@Edge for authorization, making it an ideal choice for serving web content globally. Lambda@Edge is a service that lets you run AWS Lambda functions globally closer to users, providing lower latency and faster response times. It can also handle authorization logic at the edge to secure content in CloudFront. For this scenario, Lambda@Edge can provide authorization for the web application while leveraging the low- latency benefit of running at the edge.

NEW QUESTION 177
- (Topic 3)
A company wants to create an application to store employee data in a hierarchical structured relationship. The company needs a minimum-latency response to high-traffic queries for the employee data and must protect any sensitive data. The company also need to receive monthly email messages if any financial information is present in the employee data.
Which combination of steps should a solutin architect take to meet these requirement? (
Select TWO.)

A. Use Amazon Redshift to store the employee data in hierarchie
B. Unload the data to Amazon S3 every month.
C. Use Amazon DynamoDB to store the employee data in hierarchies Export the data to Amazon S3 every month.
D. Configure Amazon Macie for the AWS account Integrate Macie with Amazon EventBridge to send monthly events to AWS Lambda.
E. Use Amazon Athena to analyze the employee data in Amazon S3 integrate Athena with Amazon QuickSight to publish analysis dashboards and share the dashboards with users.
F. Configure Amazon Macie for the AWS accoun
G. integrate Macie with Amazon EventBridge to send monthly notifications through an Amazon Simple Notification Service (Amazon SNS) subscription.

Answer: BE

Explanation:
https://docs.aws.amazon.com/prescriptive-guidance/latest/dynamodb-hierarchical-data-model/introduction.html

NEW QUESTION 180
- (Topic 3)
A rapidly growing ecommerce company is running its workloads in a single AWS Region. A solutions architect must create a disaster recovery (DR) strategy that includes a different AWS Region The company wants its database to be up to date in the DR Region with the least possible latency The remaining infrastructure in the DR Region needs to run at reduced capacity and must be able to scale up it necessary
Which solution will meet these requirements with the LOWEST recovery time objective (RTO)?

A. Use an Amazon Aurora global database with a pilot light deployment
B. Use an Amazon Aurora global database with a warm standby deployment
C. Use an Amazon RDS Multi-AZ DB instance with a pilot light deployment
D. Use an Amazon RDS Multi-AZ DB instance with a warm standby deployment

Answer: B

Explanation:
https://docs.aws.amazon.com/whitepapers/latest/disaster-recovery-workloads-on-aws/disaster-recovery-options-in-the-cloud.html

NEW QUESTION 184
- (Topic 3)
A company is deploying a new application on Amazon EC2 instances. The application writes data to Amazon Elastic Block Store (Amazon EBS) volumes. The company needs to ensure that all data that is written to the EBS volumes is encrypted at rest.
Which solution wil meet this requirement?

A. Create an IAM role that specifies EBS encryptio
B. Attach the role to the EC2 instances.
C. Create the EBS volumes as encrypted volumes Attach the EBS volumes to the EC2 instances.
D. Create an EC2 instance tag that has a key of Encrypt and a value of Tru
E. Tag all instances that require encryption at the ESS level.

F. Create an AWS Key Management Service (AWS KMS) key policy that enforces EBS encryption in the account Ensure that the key policy is active.

Answer: B

Explanation:
The solution that will meet the requirement of ensuring that all data that is written to the EBS volumes is encrypted at rest is B. Create the EBS volumes as encrypted volumes and attach the encrypted EBS volumes to the EC2 instances. When you create an EBS volume, you can specify whether to encrypt the volume. If you choose to encrypt the volume, all data written to the volume is automatically encrypted at rest using AWS-managed keys. You can also use customer-managed keys (CMKs) stored in AWS KMS to encrypt and protect your EBS volumes. You can create encrypted EBS volumes and attach them to EC2 instances to ensure that all data written to the volumes is encrypted at rest.

NEW QUESTION 186
- (Topic 3)
An application runs on Amazon EC2 instances in private subnets. The application needs to access an Amazon DynamoDB table. What is the MOST secure way to access the table while ensuring that the traffic does not leave the AWS network?

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

Answer: A

Explanation:
https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/vpc-endpoints- dynamodb.html
A VPC endpoint for DynamoDB enables Amazon EC2 instances in your VPC to use their private IP addresses to access DynamoDB with no exposure to the public internet. Your EC2 instances do not require public IP addresses, and you don't need an internet gateway, a NAT device, or a virtual private gateway in your VPC. You use endpoint policies to control access to DynamoDB. Traffic between your VPC and the AWS service does not leave the Amazon network.

NEW QUESTION 187
- (Topic 3)
A solutions architect is creating a new VPC design There are two public subnets for the load balancer, two private subnets for web servers and two private subnets for MySQL The web servers use only HTTPS The solutions architect has already created a security group tor the load balancer allowing port 443 from 0 0 0 0/0 Company policy requires that each resource has the teas! access required to still be able to perform its tasks
Which additional configuration strategy should the solutions architect use to meet these requirements?

A. Create a security group for the web servers and allow port 443 from 0.0.0.0/0 Create a security group for the MySQL servers and allow port 3306 from the web servers security group
B. Create a network ACL for the web servers and allow port 443 from 0.0.0.0/0 Create a network ACL (or the MySQL servers and allow port 3306 from the web servers security group
C. Create a security group for the web servers and allow port 443 from the load balancer Create a security group for the MySQL servers and allow port 3306 from the web servers security group
D. Create a network ACL 'or the web servers and allow port 443 from the load balancer Create a network ACL for the MySQL servers and allow port 3306 from the web servers security group

Answer: C

Explanation:
This answer is correct because it provides a resilient and durable replacement for the on- premises file share that is compatible with Windows IIS web servers. Amazon FSx for Windows File Server is a fully managed service that provides shared file storage built on Windows Server. It supports the SMB protocol and integrates with Microsoft Active Directory, which enables seamless access and authentication for Windows-based applications. Amazon FSx for Windows File Server also offers the following benefits:
? Resilience: Amazon FSx for Windows File Server can be deployed in multiple
Availability Zones, which provides high availability and failover protection. It also supports automatic backups and restores, as well as self-healing features that detect and correct issues.
? Durability: Amazon FSx for Windows File Server replicates data within and across Availability Zones, and stores data on highly durable storage devices. It also supports encryption at rest and in transit, as well as file access auditing and data deduplication.
? Performance: Amazon FSx for Windows File Server delivers consistent sub-millisecond latencies and high throughput for file operations. It also supports SSD storage, native Windows features such as Distributed File System (DFS) Namespaces and Replication, and user-driven performance scaling.
By configuring the Amazon FSx file share to use an AWS KMS CMK to encrypt the images in the file share, the company can protect the images from unauthorized access and comply with company policy. By using NTFS permission sets on the images, the company can prevent accidental deletion of the images by restricting who can modify or delete them. References:
? Amazon FSx for Windows File Server
? Using Microsoft Windows file shares

NEW QUESTION 189
- (Topic 3)
A company is running a critical business application on Amazon EC2 instances behind an Application Load Balancer The EC2 instances run in an Auto Scaling group and access an Amazon RDS DB instance
The design did not pass an operational review because the EC2 instances and the DB instance are all located in a single Availability Zone A solutions architect must update the design to use a second Availability Zone
Which solution will make the application highly available?

A. Provision a subnet in each Availability Zone Configure the Auto Scaling group to distribute the EC2 instances across bothAvailability Zones Configure the DB instance with connections to each network
B. Provision two subnets that extend across both Availability Zones Configure the Auto Scaling group to distribute the EC2 instancesacross both Availability Zones Configure the DB instance with connections to each network
C. Provision a subnet in each Availability Zone Configure the Auto Scaling group to distribute the EC2 instances across both Availability Zones Configure the DB instance for Multi-AZ deployment
D. Provision a subnet that extends across both Availability Zones Configure the Auto Scaling group to distribute the EC2 instancesacross both Availability Zones

Configure the DB instance for Multi-AZ deployment

Answer: C

Explanation:
https://aws.amazon.com/vpc/faqs/#:~:text=Can%20a%20subnet%20span%20Availability,w ithin%20a%20single%20Availability%20Zone.

NEW QUESTION 193
- (Topic 3)
A company wants to configure its Amazon CloudFront distribution to use SSL/TLS certificates. The company does not want to use the default domain name for the distribution. Instead, the company wants to use a different domain name for the distribution.
Which solution will deploy the certificate with icurring any additional costs?

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

Answer: C

Explanation:
This option is the most efficient because it requests an Amazon issued public certificate from AWS Certificate Manager (ACM), which is a service that lets you easily provision, manage, and deploy public and private SSL/TLS certificates for use with AWS services and your internal connected resources1. It also requests the certificate in the us-east-1 Region, which is required for using an ACM certificate with CloudFront2. It also meets the requirement of deploying the certificate without incurring any additional costs, as ACM does not charge for certificates that are used with supported AWS services3. This solution meets the requirement of configuring its CloudFront distribution to use SSL/TLS certificates and using a different domain name for the distribution. Option A is less efficient because it requests an Amazon issued private certificate from ACM, which is a type of certificate that can be used only within your organization or virtual private cloud (VPC). However, this does not meet the requirement of configuring its CloudFront distribution to use SSL/TLS certificates, as CloudFront requires a public certificate. It also requests the certificate in the us-east-1 Region, which is correct. Option B is less efficient because it requests an Amazon issued private certificate from ACM, which is incorrect for the same reason as option A. It also requests the certificate in the us-west-1 Region, which is incorrect as CloudFront requires a certificate in the us-east-1 Region. Option D is less efficient because it requests an Amazon issued public certificate from ACM, which is correct. However, it requests the certificate in the us-west-1 Region, which is incorrect as CloudFront requires a certificate in the us-east-1 Region.

NEW QUESTION 198
- (Topic 3)
A company provides an API to its users that automates inquiries for tax computations based on item prices. The company experiences a larger number of inquiries during the holiday season only that cause slower response times. A solutions architect needs to design a solution that is scalable and elastic.
What should the solutions architect do to accomplish this?

A. Provide an API hosted on an Amazon EC2 instanc
B. The EC2 instance performs the required computations when the API request is made.
C. Design a REST API using Amazon API Gateway that accepts the item name
D. API Gateway passes item names to AWS Lambda for tax computations.
E. Create an Application Load Balancer that has two Amazon EC2 instances behind i
F. The EC2 instances will compute the tax on the received item names.
G. Design a REST API using Amazon API Gateway that connects with an API hosted on an Amazon EC2 instanc
H. API Gateway accepts and passes the item names to the EC2 instance for tax computations.

Answer: B

Explanation:
Lambda server-less is scalable and elastic than EC2 api gateway solution

NEW QUESTION 202
- (Topic 3)
A company has an on-premises MySQL database used by the global tales team with infrequent access patterns. The sales team requires the database to have minimal downtime. A database administrate wants to migrate this database to AWS without selecting a particular instance type in anticipation of more users In the future.
Which service should a solutions architect recommend?

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

Answer: B

Explanation:
Amazon Aurora Serverless for MySQL is a fully managed, auto-scaling relational database service that scales up or down automatically based on the application demand. This service provides all the capabilities of Amazon Aurora, such as high availability, durability, and security, without requiring the customer to provision any database instances. With Amazon Aurora Serverless for MySQL, the sales team can enjoy minimal downtime since the database is designed to automatically scale to accommodate the increased traffic. Additionally, the service allows the customer to pay only for the capacity used, making it cost-effective for infrequent access patterns. Amazon RDS for MySQL could also be an option, but it requires the customer to select an instance type, and the database administrator would need to monitor and adjust the instance size manually to accommodate the increasing traffic.

NEW QUESTION 203
- (Topic 3)
A company plans to use Amazon ElastiCache for its multi-tier web application A solutions architect creates a Cache VPC for the ElastiCache cluster and an App VPC for the application's Amazon EC2 instances Both VPCs are in the us-east-1 Region

The solutions architect must implement a solution to provide tne application's EC2 instances with access to the ElastiCache cluster
Which solution will meet these requirements MOST cost-effectively?

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

Answer: A

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

NEW QUESTION 206
- (Topic 3)
A development team has launched a new application that is hosted on Amazon EC2 instances inside a development VPC. A solution architect needs to create a new VPC in the same account. The new VPC will be peered with the development VPC. The VPC CIDR block for the development VPC is 192. 168. 00/24. The solutions architect needs to create a CIDR block for the new VPC. The CIDR block must be valid for a VPC peering connection to the development VPC.
What is the SMALLEST CIOR block that meets these requirements?

A. 10.0.1.0/32
B. 192.168.0.0/24
C. 192.168.1.0/32
D. 10.0.1.0/24

Answer: D

Explanation:
The allowed block size is between a /28 netmask and /16 netmask. The CIDR block must not overlap with any existing CIDR block that's associated with the VPC.
https://docs.aws.amazon.com/vpc/latest/userguide/configure-your-vpc.html

NEW QUESTION 208
- (Topic 3)
A company hosts a three-tier web application that includes a PostgreSQL database The database stores the metadata from documents The company searches the metadata for key terms to retrieve documents that the company reviews in a report each month The documents are stored in Amazon S3 The documents are usually written only once, but they are updated frequency The reporting process takes a few hours with the use of relational queries The reporting process must not affect any document modifications or the addition of new documents.
What are the MOST operationally efficient solutions that meet these requirements? (Select TWO)

A. Set up a new Amazon DocumentDB (with MongoDB compatibility) cluster that includes a read replica Scale the read replica to generate the reports.
B. Set up a new Amazon RDS for PostgreSQL Reserved Instance and an On-Demand read replica Scale the read replica to generate the reports
C. Set up a new Amazon Aurora PostgreSQL DB cluster that includes a Reserved Instance and an Aurora Replica issue queries to the Aurora Replica to generate the reports.
D. Set up a new Amazon RDS for PostgreSQL Multi-AZ Reserved Instance Configure the reporting module to query the secondary RDS node so that the reporting module does not affect the primary node
E. Set up a new Amazon DynamoDB table to store the documents Use a fixed write capacity to support new document entries Automatically scale the read capacity to support the reports

Answer: BC

Explanation:
These options are operationally efficient because they use Amazon RDS read replicas to offload the reporting workload from the primary DB instance and avoid affecting any document modifications or the addition of new documents1. They also use Reserved Instances for the primary DB instance to reduce costs and On-Demand or Aurora Replicas for the read replicas to scale as needed. Option A is less efficient because it uses Amazon S3 Glacier Flexible Retrieval, which is a cold storage class that has higher retrieval costs and longer retrieval times than Amazon S3 Standard. It also uses EventBridge rules to invoke the job nightly, which does not meet the requirement of processing incoming data files as soon as possible. Option D is less efficient because it uses AWS Lambda to process the files, which has a maximum execution time of 15 minutes per invocation, which might not be enough for processing each file that needs 3-8 minutes. It also uses S3 event notifications to invoke the Lambda function when the files arrive, which could cause concurrency issues if there are thousands of small data files arriving periodically. Option E is less efficient because it uses Amazon DynamoDB, which is a NoSQL database service that does not support relational queries, which are needed for generating the reports. It also uses fixed write capacity, which could cause throttling or underutilization depending on the incoming data files.

NEW QUESTION 212
- (Topic 3)
A solutions architect is designing a two-tiered architecture that includes a public subnet and a database subnet. The web servers in the public subnet must be open to the internet on port 443. The Amazon RDS for MySQL D6 instance in the database subnet must be accessible only to the web servers on port 3306.
Which combination of steps should the solutions architect take to meet these requirements? (Select TWO.)

A. Create a network ACL for the public subnet Add a rule to deny outbound traffic to 0 0 0 0/0 on port 3306
B. Create a security group for the DB instance Add a rule to allow traffic from the public subnet CIDR block on port 3306
C. Create a security group for the web servers in the public subnet Add a rule to allow traffic from 0 0 0 O'O on port 443
D. Create a security group for the DB instance Add a rule to allow traffic from the web servers' security group on port 3306
E. Create a security group for the DB instance Add a rule to deny all traffic except traffic from the web servers' security group on port 3306

Answer: BC

Explanation:
Security groups are virtual firewalls that protect AWS instances and can be applied to EC2, ELB and RDS1. Security groups have rules for inbound and outbound traffic and are stateful, meaning that responses to allowed inbound traffic are allowed to flow out of the instance2. Network ACLs are different from security groups in several ways. They cover entire subnets, not individual instances, and are stateless, meaning that they require rules for both inbound and outbound traffic2. Network ACLs also support deny rules, while security groups only support allow rules2.
To meet the requirements of the scenario, the solutions architect should create two security groups: one for the DB instance and one for the web servers in the public subnet. The security group for the DB instance should allow traffic from the public subnet CIDR block on port 3306, which is the default port for MySQL3. This way, only the web servers in the public subnet can access the DB instance on that port. The security group for the web servers should allow traffic from 0 0 0 O'O on port 443, which is the default port for HTTPS 4. This way, the web servers can accept secure connections from the internet on that port.

NEW QUESTION 214
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