



# Amazon-Web-Services

## Exam Questions SAP-C02

AWS Certified Solutions Architect - Professional

### NEW QUESTION 1

- (Exam Topic 1)

A company wants to deploy an AWS WAF solution to manage AWS WAF rules across multiple AWS accounts. The accounts are managed under different OUs in AWS Organizations.

Administrators must be able to add or remove accounts or OUs from managed AWS WAF rule sets as needed. Administrators also must have the ability to automatically update and remediate noncompliant AWS WAF rules in all accounts

Which solution meets these requirements with the LEAST amount of operational overhead?

- A. Use AWS Firewall Manager to manage AWS WAF rules across accounts in the organization
- B. Use an AWS Systems Manager Parameter Store parameter to store account numbers and OUs to manage Update the parameter as needed to add or remove accounts or OUs Use an Amazon EventBridge (Amazon CloudWatch Events) rule to identify any changes to the parameter and to invoke an AWS Lambda function to update the security policy in the Firewall Manager administrative account
- C. Deploy an organization-wide AWS Config rule that requires all resources in the selected OUs to associate the AWS WAF rule
- D. Deploy automated remediation actions by using AWS Lambda to fix noncompliant resource
- E. Deploy AWS WAF rules by using an AWS CloudFormation stack set to target the same OUs where the AWS Config rule is applied.
- F. Create AWS WAF rules in the management account of the organization
- G. Use AWS Lambda environment variables to store account numbers and OUs to manage Update environment variables as needed to add or remove accounts or OUs Create cross-account IAM roles in member account
- H. Assume the roles by using AWS Security Token Service (AWS STS) in the Lambda function to create and update AWS WAF rules in the member accounts
- I. Use AWS Control Tower to manage AWS WAF rules across accounts in the organization
- J. Use AWS Key Management Service (AWS KMS) to store account numbers and OUs to manage Update AWS KMS as needed to add or remove accounts or OU
- K. Create IAM users in member accounts Allow AWS Control Tower in the management account to use the access key and secret access key to create and update AWS WAF rules in the member accounts

**Answer: B**

### NEW QUESTION 2

- (Exam Topic 1)

A company has a website that enables users to upload videos. Company policy states the uploaded videos must be analyzed for restricted content. An uploaded video is placed in Amazon S3, and a message is pushed to an Amazon SQS queue with the video's location. A backend application pulls this location from Amazon SQS and analyzes the video.

The video analysis is compute-intensive and occurs sporadically during the day The website scales with demand. The video analysis application runs on a fixed number of instances. Peak demand occurs during the holidays, so the company must add instances to the application during this time. All instances used are currently on-demand Amazon EC2 T2 instances. The company wants to reduce the cost of the current solution.

Which of the following solutions is MOST cost-effective?

- A. Keep the website on T2 instance
- B. Determine the minimum number of website instances required during off-peak times and use Spot Instances to cover them while using Reserved Instances to cover peak demand
- C. Use Amazon EC2 R4 and Amazon EC2 R5 Reserved Instances in an Auto Scaling group for the video analysis application
- D. Keep the website on T2 instance
- E. Determine the minimum number of website instances required during off-peak times and use Reserved Instances to cover them while using On-Demand Instances to cover peak demand
- F. Use Spot Fleet for the video analysis application comprised of Amazon EC2 C4 and Amazon EC2 C5 Spot Instances.
- G. Migrate the website to AWS Elastic Beanstalk and Amazon EC2 C4 instance
- H. Determine the minimum number of website instances required during off-peak times and use On-Demand Instances to cover them while using Spot capacity to cover peak demand Use Spot Fleet for the video analysis application comprised of C4 and Amazon EC2 C5 instances.
- I. Migrate the website to AWS Elastic Beanstalk and Amazon EC2 R4 instance
- J. Determine the minimum number of website instances required during off-peak times and use Reserved Instances to cover them while using On-Demand Instances to cover peak demand Use Spot Fleet for the video analysis application comprised of R4 and Amazon EC2 R5 instances

**Answer: B**

### NEW QUESTION 3

- (Exam Topic 1)

A company is running an application on several Amazon EC2 instances in an Auto Scaling group behind an Application Load Balancer. The load on the application varies throughout the day, and EC2 instances are scaled in and out on a regular basis. Log files from the EC2 instances are copied to a central Amazon S3 bucket every 15 minutes. The security team discovers that log files are missing from some of the terminated EC2 instances.

Which set of actions will ensure that log files are copied to the central S3 bucket from the terminated EC2 instances?

- A. Create a script to copy log files to Amazon S3, and store the script in a file on the EC2 instance
- B. Create an Auto Scaling lifecycle hook and an Amazon EventBridge (Amazon CloudWatch Events) rule to detect lifecycle events from the Auto Scaling group
- C. Invoke an AWS Lambda function on the autoscaling:EC2\_INSTANCE\_TERMINATING transition to send ABANDON to the Auto Scaling group to prevent termination, run the script to copy the log files, and terminate the instance using the AWS SDK.
- D. Create an AWS Systems Manager document with a script to copy log files to Amazon S3. Create an Auto Scaling lifecycle hook and an Amazon EventBridge (Amazon CloudWatch Events) rule to detect lifecycle events from the Auto Scaling group
- E. Invoke an AWS Lambda function on the autoscaling:EC2\_INSTANCE\_TERMINATING transition to call the AWS Systems Manager API SendCommand operation to run the document to copy the log files and send CONTINUE to the Auto Scaling group to terminate the instance.
- F. Change the log delivery rate to every 5 minutes
- G. Create a script to copy log files to Amazon S3, and add the script to EC2 instance user data
- H. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to detect EC2 instance termination
- I. Invoke an AWS Lambda function from the EventBridge (CloudWatch Events) rule that uses the AWS CLI to run the user-data script to copy the log files and terminate the instance.
- J. Create an AWS Systems Manager document with a script to copy log files to Amazon S3. Create an Auto Scaling lifecycle hook that publishes a message to an Amazon Simple Notification Service (Amazon SNS) topic
- K. From the SNS notification, call the AWS Systems Manager API SendCommand operation to run the document to copy the log files and send ABANDON to the Auto Scaling group to terminate the instance.

**Answer:** B

**Explanation:**

<https://docs.aws.amazon.com/autoscaling/ec2/userguide/adding-lifecycle-hooks.html>

- Refer to Default Result section - If the instance is terminating, both abandon and continue allow the instance

to terminate. However, abandon stops any remaining actions, such as other lifecycle hooks, and continue allows any other lifecycle hooks to complete.

<https://aws.amazon.com/blogs/infrastructure-and-automation/run-code-before-terminating-an-ec2-auto-scaling-i> <https://github.com/aws-samples/aws-lambda-lifecycle-hooks-function>

<https://github.com/aws-samples/aws-lambda-lifecycle-hooks-function/blob/master/cloudformation/template.yaml>

**NEW QUESTION 4**

- (Exam Topic 1)

A financial services company logs personally identifiable information 10 its application logs stored in Amazon S3. Due to regulatory compliance requirements, the log files must be encrypted at rest. The security team has mandated that the company's on-premises hardware security modules (HSMs) be used to generate the CMK material.

Which steps should the solutions architect take to meet these requirements?

- A. Create an AWS CloudHSM cluste
- B. Create a new CMK in AWS KMS using AWS\_CloudHSM as the source (or the key material and an origin of AWS\_CLOUDHSM)
- C. Enable automatic key rotation on the CMK with a duration of 1 year
- D. Configure a bucket policy on the logging bucket that disallows uploads of unencrypted data and requires that the encryption source be AWS KMS.
- E. Provision an AWS Direct Connect connection, ensuring there is no overlap of the RFC 1918 address space between on-premises hardware and the VPC
- F. Configure an AWS bucket policy on the logging bucket that requires all objects to be encrypted
- G. Configure the logging application to query the on-premises HSMs from the AWS environment for the encryption key material, and create a unique CMK for each logging event.
- H. Create a CMK in AWS KMS with no key material and an origin of EXTERNAL
- I. Import the key material generated from the on-premises HSMs into the CMK using the public key and import token provided by AWS
- J. Configure a bucket policy on the logging bucket that disallows uploads of non-encrypted data and requires that the encryption source be AWS KMS.
- K. Create a new CMK in AWS KMS with AWS-provided key material and an origin of AWS\_KMS
- L. Disable this CMK
- M. and overwrite the key material with the key material from the on-premises HSM using the public key and import token provided by AWS
- N. Re-enable the CMK
- O. Enable automatic key rotation on the CMK with a duration of 1 year
- P. Configure a bucket policy on the logging bucket that disallows uploads of non-encrypted data and requires that the encryption source be AWS KMS.

**Answer:** C

**Explanation:**

<https://aws.amazon.com/blogs/security/how-to-byok-bring-your-own-key-to-aws-kms-for-less-than-15-00-a-year>

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

**NEW QUESTION 5**

- (Exam Topic 1)

A company wants to move a web application to AWS. The application stores session information locally on each web server, which will make auto scaling difficult. As part of the migration, the application will be rewritten to decouple the session data from the web servers. The company requires low latency, scalability, and availability.

Which service will meet the requirements for storing the session information in the MOST cost-effective way?

- A. Amazon ElastiCache with the Memcached engine
- B. Amazon S3
- C. Amazon RDS MySQL
- D. Amazon ElastiCache with the Redis engine

**Answer:** D

**Explanation:**

<https://aws.amazon.com/caching/session-management/>

Building real-time apps across versatile use cases like gaming, geospatial service, caching, session stores, or queuing, with advanced data structures, replication, and point-in-time snapshot support. Memcached: Building a simple, scalable caching layer for your data-intensive apps. <https://aws.amazon.com/elasticache/>

**NEW QUESTION 6**

- (Exam Topic 1)

A solutions architect is designing the data storage and retrieval architecture for a new application that a company will be launching soon. The application is designed to ingest millions of small records per minute from devices all around the world. Each record is less than 4 KB in size and needs to be stored in a durable location where it can be retrieved with low latency. The data is ephemeral and the company is required to store the data for 120 days only, after which the data can be deleted.

The solutions architect calculates that, during the course of a year, the storage requirements would be about 10-15 TB.

Which storage strategy is the MOST cost-effective and meets the design requirements?

- A. Design the application to store each incoming record as a single .csv file in an Amazon S3 bucket to allow for indexed retrieval
- B. Configure a lifecycle policy to delete data older than 120 days.
- C. Design the application to store each incoming record in an Amazon DynamoDB table properly configured for the scale
- D. Configure the DynamoDB Time to Live (TTL) feature to delete records older than 120 days.
- E. Design the application to store each incoming record in a single table in an Amazon RDS MySQL database
- F. Run a nightly cron job that executes a query to delete any records older than 120 days.
- G. Design the application to batch incoming records before writing them to an Amazon S3 bucket
- H. Update the metadata for the object to contain the list of records in the batch and use the Amazon S3 metadata search feature to retrieve the data
- I. Configure a lifecycle policy to delete the data after 120 days.

**Answer:** B

**Explanation:**

DynamoDB with TTL, cheaper for sustained throughput of small items + suited for fast retrievals. S3 cheaper for storage only, much higher costs with writes. RDS not designed for this use case.

**NEW QUESTION 7**

- (Exam Topic 1)

A company has an application that sells tickets online and experiences bursts of demand every 7 days. The application has a stateless presentation layer running on Amazon EC2, an Oracle database to store unstructured data catalog information, and a backend API layer. The front-end layer uses an Elastic Load Balancer to distribute the load across nine On-Demand Instances over three Availability Zones (AZs). The Oracle database is running on a single EC2 instance. The company is experiencing performance issues when running more than two concurrent campaigns. A solutions architect must design a solution that meets the following requirements:

- Address scalability issues.
- Increase the level of concurrency.
- Eliminate licensing costs.
- Improve reliability.

Which set of steps should the solutions architect take?

- A. Create an Auto Scaling group for the front end with a combination of On-Demand and Spot Instances to reduce cost
- B. Convert the Oracle database into a single Amazon RDS reserved DB instance.
- C. Create an Auto Scaling group for the front end with a combination of On-Demand and Spot Instances to reduce cost
- D. Create two additional copies of the database instance, then distribute the databases in separate AZs.
- E. Create an Auto Scaling group for the front end with a combination of On-Demand and Spot Instances to reduce cost
- F. Convert the tables in the Oracle database into Amazon DynamoDB tables.
- G. Convert the On-Demand Instances into Spot Instances to reduce costs for the front end
- H. Convert the tables in the Oracle database into Amazon DynamoDB tables.

**Answer: C**

**Explanation:**

Combination of On-Demand and Spot Instances + DynamoDB.

**NEW QUESTION 8**

- (Exam Topic 1)

A group of research institutions and hospitals are in a partnership to study 2 PBs of genomic data. The institute that owns the data stores it in an Amazon S3 bucket and updates it regularly. The institute would like to give all of the organizations in the partnership read access to the data. All members of the partnership are extremely cost-conscious, and the institute that owns the account with the S3 bucket is concerned about covering the costs for requests and data transfers from Amazon S3.

Which solution allows for secure datasharing without causing the institute that owns the bucket to assume all the costs for S3 requests and data transfers'?

- A. Ensure that all organizations in the partnership have AWS account
- B. In the account with the S3 bucket, create a cross-account role for each account in the partnership that allows read access to the data
- C. Have the organizations assume and use that read role when accessing the data.
- D. Ensure that all organizations in the partnership have AWS account
- E. Create a bucket policy on the bucket that owns the data The policy should allow the accounts in the partnership read access to the bucket
- F. Enable Requester Pays on the bucket
- G. Have the organizations use their AWS credentials when accessing the data.
- H. Ensure that all organizations in the partnership have AWS account
- I. Configure buckets in each of the accounts with a bucket policy that allows the institute that owns the data the ability to write to the bucket Periodically sync the data from the institute's account to the other organization
- J. Have the organizations use their AWS credentials when accessing the data using their accounts
- K. Ensure that all organizations in the partnership have AWS account
- L. In the account with the S3 bucket, create a cross-account role for each account in the partnership that allows read access to the data
- M. Enable Requester Pays on the bucket
- N. Have the organizations assume and use that read role when accessing the data.

**Answer: B**

**Explanation:**

In general, bucket owners pay for all Amazon S3 storage and data transfer costs associated with their bucket. A bucket owner, however, can configure a bucket to be a Requester Pays bucket. With Requester Pays buckets, the requester instead of the bucket owner pays the cost of the request and the data download from the bucket. The bucket owner always pays the cost of storing data. If you enable Requester Pays on a bucket, anonymous access to that bucket is not allowed.  
<https://docs.aws.amazon.com/AmazonS3/latest/userguide/RequesterPaysExamples.html>

**NEW QUESTION 9**

- (Exam Topic 1)

A company wants to change its internal cloud billing strategy for each of its business units. Currently, the cloud governance team shares reports for overall cloud spending with the head of each business unit. The company uses AWS Organizations to manage the separate AWS accounts for each business unit. The existing tagging standard in Organizations includes the application, environment, and owner. The cloud governance team wants a centralized solution so each business unit receives monthly reports on its cloud spending. The solution should also send notifications for any cloud spending that exceeds a set threshold.

Which solution is the MOST cost-effective way to meet these requirements?

- A. Configure AWS Budgets in each account and configure budget alerts that are grouped by application, environment, and owner
- B. Add each business unit to an Amazon SNS topic for each alert
- C. Use Cost Explorer in each account to create monthly reports for each business unit.
- D. Configure AWS Budgets in the organization's master account and configure budget alerts that are grouped by application, environment, and owner
- E. Add each business unit to an Amazon SNS topic for each alert
- F. Use Cost Explorer in the organization's master account to create monthly reports for each business unit.
- G. Configure AWS Budgets in each account and configure budget alerts that are grouped by application, environment, and owner
- H. Add each business unit to an Amazon SNS topic for each alert
- I. Use the AWS Billing and Cost Management dashboard in each account to create monthly reports for each business unit.

J. Enable AWS Cost and Usage Reports in the organization's master account and configure reports grouped by application, environment, and owner.  
K. Create an AWS Lambda function that processes AWS Cost and Usage Reports, sends budget alerts, and sends monthly reports to each business unit's email list.

**Answer:** B

**Explanation:**

Configure AWS Budgets in the organization's master account and configure budget alerts that are grouped by application, environment, and owner. Add each business unit to an Amazon SNS topic for each alert. Use Cost Explorer in the organization's master account to create monthly reports for each business unit.  
<https://aws.amazon.com/about-aws/whats-new/2019/07/introducing-aws-budgets-reports/#:~:text=AWS%20Bud>

**NEW QUESTION 10**

- (Exam Topic 1)

A company has an Amazon VPC that is divided into a public subnet and a private subnet. A web application runs in Amazon VPC, and each subnet has its own NACL. The public subnet has a CIDR of 10.0.0.0/24. An Application Load Balancer is deployed to the public subnet. The private subnet has a CIDR of 10.0.1.0/24. Amazon EC2 instances that run a web server on port 80 are launched into the private subnet. Only network traffic that is required for the Application Load Balancer to access the web application can be allowed to travel between the public and private subnets.

What collection of rules should be written to ensure that the private subnet's NACL meets the requirement? (Select TWO.)

- A. An inbound rule for port 80 from source 0.0.0.0/0
- B. An inbound rule for port 80 from source 10.0.0.0/24
- C. An outbound rule for port 80 to destination 0.0.0.0/0
- D. An outbound rule for port 80 to destination 10.0.0.0/24
- E. An outbound rule for ports 1024 through 65535 to destination 10.0.0.0/24

**Answer:** BE

**Explanation:**

Ephemeral ports are not covered in the syllabus, so be careful that you don't confuse day-to-day best practice with what is required for the exam. Link to an explanation on Ephemeral ports here: <https://acloud.guru/forums/aws-certified-solutions-architect-associate/discussion/-KUbcwo4IXefMI7janaK/netw>

**NEW QUESTION 10**

- (Exam Topic 1)

A travel company built a web application that uses Amazon Simple Email Service (Amazon SES) to send email notifications to users. The company needs to enable logging to help troubleshoot email delivery issues. The company also needs the ability to do searches that are based on recipient, subject, and time sent. Which combination of steps should a solutions architect take to meet these requirements? (Select TWO.)

- A. Create an Amazon SES configuration set with Amazon Kinesis Data Firehose as the destination.
- B. Choose to send logs to an Amazon S3 bucket.
- C. Enable AWS CloudTrail logging.
- D. Specify an Amazon S3 bucket as the destination for the logs.
- E. Use Amazon Athena to query the logs in the Amazon S3 bucket for recipient, subject, and time sent.
- F. Create an Amazon CloudWatch log group.
- G. Configure Amazon SES to send logs to the log group.
- H. Use Amazon Athena to query the logs in Amazon CloudWatch for recipient, subject, and time sent.

**Answer:** AC

**Explanation:**

<https://docs.aws.amazon.com/ses/latest/dg/event-publishing-retrieving-firehose.html>

To enable you to track your email sending at a granular level, you can set up Amazon SES to publish email sending events to Amazon CloudWatch, Amazon Kinesis Data Firehose, or Amazon Simple Notification Service based on characteristics that you define.

<https://docs.aws.amazon.com/ses/latest/dg/monitor-using-event-publishing.html>

<https://aws.amazon.com/getting-started/hands-on/build-serverless-real-time-data-processing-app-lambda-kinesis>

**NEW QUESTION 13**

- (Exam Topic 1)

A solution architect is designing an AWS account structure for a company that consists of multiple teams. All the team will work in the same AWS Region. The company needs a VPC that is connected to the on-premises network. The company expects less than 50 Mbps of total to and from the on-premises network. Which combination of steps will meet these requirements MOST cost-effectively? (Select TWO)

- A. Create an AWS CloudFormation template that provisions a VPC and the required subnet.
- B. Deploy the template to each AWS account.
- C. Create an AWS CloudFormation template that provisions a VPC and the required subnet.
- D. Deploy the template to a shared services account.
- E. Share the subnets by using AWS Resource Access Manager.
- F. Use AWS Transit Gateway along with an AWS Site-to-Site VPN for connectivity to the on-premises network.
- G. Share the transit gateway by using AWS Resource Access Manager.
- H. Use AWS Site-to-Site VPN for connectivity to the on-premises network.
- I. Use AWS Direct Connect for connectivity to the on-premises network.

**Answer:** BD

**NEW QUESTION 15**

- (Exam Topic 1)

A scientific organization requires the processing of text and picture data stored in an Amazon S3 bucket. The data is gathered from numerous radar stations during a mission's live, time-critical phase. The data is uploaded by the radar stations to the source S3 bucket. The data is preceded with the identification number of the radar station.

In a second account, the business built a destination S3 bucket. To satisfy a compliance target, data must be transferred from the source S3 bucket to the destination S3 bucket. Replication is accomplished by using an S3 replication rule that covers all items in the source S3 bucket. A single radar station has been recognized as having the most precise data. At this radar station, data replication must be completed within 30 minutes of the radar station uploading the items to the source S3 bucket. What actions should a solutions architect take to ensure that these criteria are met?

- A. Set up an AWS DataSync agent to replicate the prefixed data from the source S3 bucket to the destination S3 bucket
- B. Select to use at available bandwidth on the task, and monitor the task to ensure that it is in the TRANSFERRING status
- C. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to trigger an alert if this status changes.
- D. In the second account, create another S3 bucket to receive data from the radar station with the most accurate data. Set up a new replication rule for this new S3 bucket to separate the replication from the other radar stations. Monitor the maximum replication time to the destination.
- E. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to trigger an alert when the time exceeds the desired threshold.
- F. Enable Amazon S3 Transfer Acceleration on the source S3 bucket, and configure the radar station with the most accurate data to use the new endpoint. Monitor the S3 destination bucket's TotalRequestLatency metric. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to trigger an alert if this status changes.
- G. Create a new S3 replication rule on the source S3 bucket that filters for the keys that use the prefix of the radar station with the most accurate data. Enable S3 Replication Time Control (S3 RTC). Monitor the maximum replication time to the destination. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to trigger an alert when the time exceeds the desired threshold.

**Answer:** D

**Explanation:**

<https://docs.aws.amazon.com/AmazonS3/latest/userguide/replication-time-control.html>

**NEW QUESTION 20**

- (Exam Topic 1)

The company needs to determine which costs on the monthly AWS bill are attributable to each application or team. The company also must be able to create reports to compare costs from the last 12 months and to help forecast costs for the next 12 months. A solutions architect must recommend an AWS Billing and Cost Management solution that provides these cost reports.

Which combination of actions will meet these requirements? (Select THREE.)

- A. Activate the user-defined cost allocation tags that represent the application and the team.
- B. Activate the AWS generated cost allocation tags that represent the application and the team.
- C. Create a cost category for each application in Billing and Cost Management.
- D. Activate IAM access to Billing and Cost Management.
- E. Create a cost budget.
- F. Enable Cost Explorer.

**Answer:** ACF

**Explanation:**

<https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/manage-cost-categories.html> <https://aws.amazon.com/premiumsupport/knowledge-center/cost-explorer-analyze-spending-and-usage/> <https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/manage-cost-categories.html>  
<https://docs.aws.amazon.com/cost-management/latest/userguide/ce-enable.html>

**NEW QUESTION 22**

- (Exam Topic 1)

A company is running a data-intensive application on AWS. The application runs on a cluster of hundreds of Amazon EC2 instances. A shared file system also runs on several EC2 instances that store 200 TB of data. The application reads and modifies the data on the shared file system and generates a report. The job runs once monthly, reads a subset of the files from the shared file system, and takes about 72 hours to complete. The compute instances scale in an Auto Scaling group, but the instances that host the shared file system run continuously. The compute and storage instances are all in the same AWS Region.

A solutions architect needs to reduce costs by replacing the shared file system instances. The file system must provide high performance access to the needed data for the duration of the 72-hour run.

Which solution will provide the LARGEST overall cost reduction while meeting these requirements?

- A. Migrate the data from the existing shared file system to an Amazon S3 bucket that uses the S3 Intelligent-Tiering storage class.
- B. Before the job runs each month, use Amazon FSx for Lustre to create a new file system with the data from Amazon S3 by using lazy loadin
- C. Use the new file system as the shared storage for the duration of the job.
- D. Delete the file system when the job is complete.
- E. Migrate the data from the existing shared file system to a large Amazon Elastic Block Store (Amazon EBS) volume with Multi-Attach enable
- F. Attach the EBS volume to each of the instances by using a user data script in the Auto Scaling group launch template.
- G. Use the EBS volume as the shared storage for the duration of the job.
- H. Detach the EBS volume when the job is complete.
- I. Migrate the data from the existing shared file system to an Amazon S3 bucket that uses the S3 Standard storage class.
- J. Before the job runs each month, use Amazon FSx for Lustre to create a new file system with the data from Amazon S3 by using batch loadin
- K. Use the new file system as the shared storage for the duration of the job.
- L. Delete the file system when the job is complete.
- M. Migrate the data from the existing shared file system to an Amazon S3 bucket.
- N. Before the job runs each month, use AWS Storage Gateway to create a file gateway with the data from Amazon S3. Use the file gateway as the shared storage for the job.
- O. Delete the file gateway when the job is complete.

**Answer:** B

**NEW QUESTION 26**

- (Exam Topic 1)

A solutions architect needs to advise a company on how to migrate its on-premises data processing application to the AWS Cloud. Currently, users upload input files through a web portal. The web server then stores the uploaded files on NAS and messages the processing server over a message queue. Each media file can take up to 1 hour to process. The company has determined that the number of media files awaiting processing is significantly higher during business hours, with the number of files rapidly declining after business hours.

What is the MOST cost-effective migration recommendation?

- A. Create a queue using Amazon SQ
- B. Configure the existing web server to publish to the new queue. When there are messages in the queue, invoke an AWS Lambda function to pull requests from the queue and process the file
- C. Store the processed files in an Amazon S3 bucket.
- D. Create a queue using Amazon M
- E. Configure the existing web server to publish to the new queue. When there are messages in the queue, create a new Amazon EC2 instance to pull requests from the queue and process the file
- F. Store the processed files in Amazon EF
- G. Shut down the EC2 instance after the task is complete.
- H. Create a queue using Amazon M
- I. Configure the existing web server to publish to the new queue. When there are messages in the queue, invoke an AWS Lambda function to pull requests from the queue and process the file
- J. Store the processed files in Amazon EFS.
- K. Create a queue using Amazon SO
- L. Configure the existing web server to publish to the new queu
- M. Use Amazon EC2 instances in an EC2 Auto Scaling group to pull requests from the queue and process the file
- N. Scale the EC2 instances based on the SOS queue lengt
- O. Store the processed files in an Amazon S3 bucket.

**Answer:** D

**Explanation:**

<https://aws.amazon.com/blogs/compute/operating-lambda-performance-optimization-part-1/>

**NEW QUESTION 29**

- (Exam Topic 1)

A company is using AWS Organizations to manage multiple accounts. Due to regulatory requirements, the company wants to restrict specific member accounts to certain AWS Regions, where they are permitted to deploy resources. The resources in the accounts must be tagged, enforced based on a group standard, and centrally managed with minimal configuration.

What should a solutions architect do to meet these requirements?

- A. Create an AWS Config rule in the specific member accounts to limit Regions and apply a tag policy.
- B. From the AWS Billing and Cost Management console, in the master account, disable Regions for the specific member accounts and apply a tag policy on the root.
- C. Associate the specific member accounts with the roo
- D. Apply a tag policy and an SCP using conditions to limit Regions.
- E. Associate the specific member accounts with a new O
- F. Apply a tag policy and an SCP using conditions to limit Regions.

**Answer:** D

**NEW QUESTION 32**

- (Exam Topic 1)

A financial services company receives a regular data feed from its credit card servicing partner. Approximately 5.1 records are sent every 15 minutes in plaintext, delivered over HTTPS directly into an Amazon S3 bucket with server-side encryption. This feed contains sensitive credit card primary account number (PAN) data. The company needs to automatically mask the PAN before sending the data to another S3 bucket for additional internal processing. The company also needs to remove and merge specific fields, and then transform the record into JSON format. Additionally, extra feeds are likely to be added in the future, so any design needs to be easily expandable.

Which solutions will meet these requirements?

- A. Trigger an AWS Lambda function on file delivery that extracts each record and writes it to an Amazon SQS queue
- B. Trigger another Lambda function when new messages arrive in the SOS queue to process the records, writing the results to a temporary location in Amazon S3. Trigger a final Lambda function once the SOS queue is empty to transform the records into JSON format and send the results to another S3 bucket for internal processing.
- C. Trigger an AWS Lambda function on file delivery that extracts each record and writes it to an Amazon SOS queue
- D. Configure an AWS Fargate container application to
- E. automatically scale to a single instance when the SOS queue contains message
- F. Have the application process each record, and transform the record into JSON format
- G. When the queue is empty, send the results to another S3 bucket for internal processing and scale down the AWS Fargate instance.
- H. Create an AWS Glue crawler and custom classifier based on the data feed formats and build a table definition to match. Trigger an AWS Lambda function on file delivery to start an AWS Glue ETL job to transform the entire record according to the processing and transformation requirements
- I. Define the output format as JSO
- J. Once complete, have the ETL job send the results to another S3 bucket for internal processing.
- K. Create an AWS Glue crawler and custom classifier based upon the data feed formats and build a table definition to match
- L. Perform an Amazon Athena query on file delivery to start an Amazon EMR ETL job to transform the entire record according to the processing and transformation requirements
- M. Define the output format as JSO
- N. Once complete, send the results to another S3 bucket for internal processing and scale down the EMR cluster.

**Answer:** C

**Explanation:**

You can use a Glue crawler to populate the AWS Glue Data Catalog with tables. The Lambda function can be triggered using S3 event notifications when object creation events occur. The Lambda function will then trigger the Glue ETL job to transform the records, masking the sensitive data and modifying the output format to JSON. This solution meets all requirements.

Create an AWS Glue crawler and custom classifier based on the data feed formats and build a table definition to match. Trigger an AWS Lambda function on file delivery to start an AWS Glue ETL job to transform the entire record according to the processing and transformation requirements. Define the output format as JSON. Once complete, have the ETL job send the results to another S3 bucket for internal processing.

<https://docs.aws.amazon.com/glue/latest/dg/trigger-job.html>

[https://d1.awsstatic.com/Products/product-name/diagrams/product-page-diagram\\_Glue\\_Event-driven-ETL-Pipel](https://d1.awsstatic.com/Products/product-name/diagrams/product-page-diagram_Glue_Event-driven-ETL-Pipel)

### NEW QUESTION 36

- (Exam Topic 1)

A company has many services running in its on-premises data center. The data center is connected to AWS using AWS Direct Connect (DX) and an IPSec VPN. The service data is sensitive and connectivity cannot traverse the internet. The company wants to expand into a new market segment and begin offering its services to other companies that are using AWS.

Which solution will meet these requirements?

- A. Create a VPC Endpoint Service that accepts TCP traffic, host it behind a Network Load Balancer, and make the service available over DX.
- B. Create a VPC Endpoint Service that accepts HTTP or HTTPS traffic, host it behind an Application Load Balancer, and make the service available over DX.
- C. Attach an internet gateway to the VP
- D. and ensure that network access control and security group rules allow the relevant inbound and outbound traffic.
- E. Attach a NAT gateway to the VP
- F. and ensure that network access control and security group rules allow the relevant inbound and outbound traffic.

**Answer:** A

### NEW QUESTION 39

- (Exam Topic 1)

An education company is running a web application used by college students around the world. The application runs in an Amazon Elastic Container Service (Amazon ECS) cluster in an Auto Scaling group behind an Application Load Balancer (ALB). A system administrator detects a weekly spike in the number of failed login attempts, which overwhelm the application's authentication service. All the failed login attempts originate from about 500 different IP addresses that change each week. A solutions architect must prevent the failed login attempts from overwhelming the authentication service.

Which solution meets these requirements with the MOST operational efficiency?

- A. Use AWS Firewall Manager to create a security group and security group policy to deny access from the IP addresses.
- B. Create an AWS WAF web ACL with a rate-based rule, and set the rule action to Block
- C. Connect the web ACL to the ALB.
- D. Use AWS Firewall Manager to create a security group and security group policy to allow access only to specific CIDR ranges.
- E. Create an AWS WAF web ACL with an IP set match rule, and set the rule action to Block
- F. Connect the web ACL to the ALB.

**Answer:** B

#### Explanation:

<https://docs.aws.amazon.com/waf/latest/developerguide/waf-rule-statement-type-rate-based.html>

The IP set match statement inspects the IP address of a web request against a set of IP addresses and address ranges. Use this to allow or block web requests based on the IP addresses that the requests originate from. By default, AWS WAF uses the IP address from the web request origin, but you can configure the rule to use an HTTP header like X-Forwarded-For instead.

<https://docs.aws.amazon.com/waf/latest/developerguide/waf-rule-statement-type-ipset-match.html>

<https://docs.aws.amazon.com/waf/latest/developerguide/waf-rule-statement-type-rate-based.html>

### NEW QUESTION 42

- (Exam Topic 1)

A company is developing and hosting several projects in the AWS Cloud. The projects are developed across multiple AWS accounts under the same organization in AWS Organizations. The company requires the cost for cloud infrastructure to be allocated to the owning project. The team responsible for all of the AWS accounts has discovered that several Amazon EC2 instances are lacking the Project tag used for cost allocation.

Which actions should a solutions architect take to resolve the problem and prevent it from happening in the future? (Select THREE.)

- A. Create an AWS Config rule in each account to find resources with missing tags.
- B. Create an SCP in the organization with a deny action for ec2:RunInstances if the Project tag is missing.
- C. Use Amazon Inspector in the organization to find resources with missing tags.
- D. Create an IAM policy in each account with a deny action for ec2:RunInstances if the Project tag is missing.
- E. Create an AWS Config aggregator for the organization to collect a list of EC2 instances with the missing Project tag.
- F. Use AWS Security Hub to aggregate a list of EC2 instances with the missing Project tag.

**Answer:** BDE

### NEW QUESTION 43

- (Exam Topic 1)

To abide by industry regulations, a solutions architect must design a solution that will store a company's critical data in multiple public AWS Regions, including in the United States, where the company's headquarters is located. The solutions architect is required to provide access to the data stored in AWS to the company's global WAN network. The security team mandates that no traffic accessing this data should traverse the public internet.

How should the solutions architect design a highly available solution that meets the requirements and is cost-effective?

- A. Establish AWS Direct Connect connections from the company headquarters to all AWS Regions in use. Use the company WAN to send traffic over to the headquarters and then to the respective DX connection to access the data.
- B. Establish two AWS Direct Connect connections from the company headquarters to an AWS Region. Use the company WAN to send traffic over a DX connection
- C. Use inter-region VPC peering to access the data in other AWS Regions.
- D. Establish two AWS Direct Connect connections from the company headquarters to an AWS Region. Use the company WAN to send traffic over a DX connection
- E. Use an AWS transit VPC solution to access data in other AWS Regions.
- F. Establish two AWS Direct Connect connections from the company headquarters to an AWS Region. Use the company WAN to send traffic over a DX connection
- G. Use Direct Connect Gateway to access data in other AWS Regions.

**Answer:** D

#### Explanation:

This feature also allows you to connect to any of the participating VPCs from any Direct Connect location, further reducing your costs for making using AWS services on a cross-region basis. <https://aws.amazon.com/blogs/aws/new-aws-direct-connect-gateway-inter-region-vpc-access/>

<https://docs.aws.amazon.com/whitepapers/latest/aws-vpc-connectivity-options/aws-direct-connect-aws-transit-g>

#### NEW QUESTION 46

- (Exam Topic 1)

A company has an application that generates reports and stores them in an Amazon S3 bucket. When a user accesses their report, the application generates a signed URL to allow the user to download the report. The company's security team has discovered that the files are public and that anyone can download them without authentication. The company has suspended the generation of new reports until the problem is resolved.

Which set of actions will immediately remediate the security issue without impacting the application's normal workflow?

- A. Create an AWS Lambda function that applies a deny all policy for users who are not authenticated. Create a scheduled event to invoke the Lambda function.
- B. Review the AWS Trusted Advisor bucket permissions check and implement the recommended actions.
- C. Run a script that puts a private ACL on all of the objects in the bucket.
- D. Use the Block Public Access feature in Amazon S3 to set the IgnorePublicAcls option to TRUE on the bucket.

**Answer: D**

#### Explanation:

The S3 bucket is allowing public access and this must be immediately disabled. Setting the IgnorePublicAcls option to TRUE causes Amazon S3 to ignore all public ACLs on a bucket and any objects that it contains. The other settings you can configure with the Block Public Access Feature are:

- o BlockPublicAcls – PUT bucket ACL and PUT objects requests are blocked if granting public access.
- o BlockPublicPolicy – Rejects requests to PUT a bucket policy if granting public access.
- o RestrictPublicBuckets – Restricts access to principles in the bucket owners' AWS account. <https://aws.amazon.com/s3/features/block-public-access/>

#### NEW QUESTION 47

- (Exam Topic 1)

A company is running a containerized application in the AWS Cloud. The application is running by using Amazon Elastic Container Service (Amazon ECS) on a set of Amazon EC2 instances. The EC2 instances run in an Auto Scaling group.

The company uses Amazon Elastic Container Registry (Amazon ECR) to store its container images. When a new image version is uploaded, the new image version receives a unique tag.

The company needs a solution that inspects new image versions for common vulnerabilities and exposures. The solution must automatically delete new image tags that have Critical or High severity findings. The solution also must notify the development team when such a deletion occurs.

Which solution meets these requirements?

- A. Configure scan on push on the repository.
- B. Use Amazon EventBridge (Amazon CloudWatch Events) to invoke an AWS Step Functions state machine when a scan is complete for images that have Critical or High severity findings. Use the Step Functions state machine to delete the image tag for those images and to notify the development team through Amazon Simple Notification Service (Amazon SNS).
- C. Configure scan on push on the repository. Configure scan results to be pushed to an Amazon Simple Queue Service (Amazon SQS) queue. Invoke an AWS Lambda function when a new message is added to the SQS queue. Use the Lambda function to delete the image tag for images that have Critical or High severity findings.
- D. Notify the development team by using Amazon Simple Email Service (Amazon SES).
- E. Schedule an AWS Lambda function to start a manual image scan every hour. Configure Amazon EventBridge (Amazon CloudWatch Events) to invoke another Lambda function when a scan is complete.
- F. Use the second Lambda function to delete the image tag for images that have Critical or High severity findings.
- G. Notify the development team by using Amazon Simple Notification Service (Amazon SNS).
- H. Configure periodic image scan on the repository. Configure scan results to be added to an Amazon Simple Queue Service (Amazon SQS) queue. Invoke an AWS Step Functions state machine when a new message is added to the SQS queue. Use the Step Functions state machine to delete the image tag for images that have Critical or High severity findings.
- I. Notify the development team by using Amazon Simple Email Service (Amazon SES).

**Answer: C**

#### NEW QUESTION 48

- (Exam Topic 1)

A company stores sales transaction data in Amazon DynamoDB tables. To detect anomalous behaviors and respond quickly, all changes to the items stored in the DynamoDB tables must be logged within 30 minutes.

Which solution meets the requirements?

- A. Copy the DynamoDB tables into Apache Hive tables on Amazon EMR every hour and analyze them (or anomalous behavior).
- B. Send Amazon SNS notifications when anomalous behaviors are detected.
- C. Use AWS CloudTrail to capture all the APIs that change the DynamoDB table.
- D. Send SNS notifications when anomalous behaviors are detected using CloudTrail event filtering.
- E. Use Amazon DynamoDB Streams to capture and send updates to AWS Lambda.
- F. Create a Lambda function to output records to Amazon Kinesis Data Stream.
- G. Analyze any anomalies with Amazon Kinesis Data Analytics.
- H. Send SNS notifications when anomalous behaviors are detected.
- I. Use event patterns in Amazon CloudWatch Events to capture DynamoDB API call events with an AWS Lambda function as a target to analyze behavior.
- J. Send SNS notifications when anomalous behaviors are detected.

**Answer: C**

#### Explanation:

[https://aws.amazon.com/blogs/database/dynamodb-streams-use-cases-and-design-patterns/#:~:text=DynamoDB DynamoDb Stream to capture DynamoDB update. And Kinesis Data Analytics for anomaly detection \(it uses AWS proprietary Random Cut Forest Algorithm\)](https://aws.amazon.com/blogs/database/dynamodb-streams-use-cases-and-design-patterns/#:~:text=DynamoDB DynamoDb Stream to capture DynamoDB update. And Kinesis Data Analytics for anomaly detection (it uses AWS proprietary Random Cut Forest Algorithm))

#### NEW QUESTION 52

- (Exam Topic 1)

A solutions architect is responsible for redesigning a legacy Java application to improve its availability, data durability, and scalability. Currently, the application runs on a single high-memory Amazon EC2 instance. It accepts HTTP requests from upstream clients, adds them to an in-memory queue, and responds with a 200 status. A separate application thread reads items from the queue, processes them, and persists the results to an Amazon RDS MySQL instance. The processing time for each item takes 90 seconds on average, most of which is spent waiting on external service calls, but the application is written to process multiple items in parallel.

Traffic to this service is unpredictable. During periods of high load, items may sit in the internal queue for over an hour while the application processes the backlog. In addition, the current system has issues with availability and data loss if the single application node fails.

Clients that access this service cannot be modified. They expect to receive a response to each HTTP request they send within 10 seconds before they will time out and retry the request.

Which approach would improve the availability and durability of the system while decreasing the processing latency and minimizing costs?

- A. Create an Amazon API Gateway REST API that uses Lambda proxy integration to pass requests to an AWS Lambda function
- B. Migrate the core processing code to a Lambda function and write a wrapper class that provides a handler method that converts the proxy events to the internal application data model and invokes the processing module.
- C. Create an Amazon API Gateway REST API that uses a service proxy to put items in an Amazon SQS queue
- D. Extract the core processing code from the existing application and update it to pull items from Amazon SQS instead of an in-memory queue
- E. Deploy the new processing application to smaller EC2 instances within an Auto Scaling group that scales dynamically based on the approximate number of messages in the Amazon SQS queue.
- F. Modify the application to use Amazon DynamoDB instead of Amazon RDS
- G. Configure Auto Scaling for the DynamoDB table
- H. Deploy the application within an Auto Scaling group with a scaling policy based on CPU utilization
- I. Back the in-memory queue with a memory-mapped file to an instance store volume and periodically write that file to Amazon S3.
- J. Update the application to use a Redis task queue instead of the in-memory queue
- K. Build a Docker container image for the application
- L. Create an Amazon ECS task definition that includes the application container and a separate container to host Redis
- M. Deploy the new task definition as an ECS service using AWS Fargate, and enable Auto Scaling.

**Answer: B**

**Explanation:**

The obvious challenges here are long workloads, scalability based on queue load, and reliability. Almost always the de facto answer to queue related workload is SQS. Since the workloads are very long (90 minutes) Lambdas cannot be used (15 mins max timeout). So, autoscaled smaller EC2 nodes that wait on external services to complete the task makes more sense. If the task fails, the message is returned to the queue and retried.

**NEW QUESTION 56**

- (Exam Topic 1)

A company provides a centralized Amazon EC2 application hosted in a single shared VPC. The centralized application must be accessible from client applications running in the VPCs of other business units. The centralized application front end is configured with a Network Load Balancer (NLB) for scalability.

Up to 10 business unit VPCs will need to be connected to the shared VPC. Some of the business unit VPC CIDR blocks overlap with the shared VPC, and some overlap with each other. Network connectivity to the centralized application in the shared VPC should be allowed from authorized business unit VPCs only.

Which network configuration should a solutions architect use to provide connectivity from the client applications in the business unit VPCs to the centralized application in the shared VPC?

- A. Create an AWS Transit Gateway
- B. Attach the shared VPC and the authorized business unit VPCs to the transit gateway
- C. Create a single transit gateway route table and associate it with all of the attached VPCs
- D. Allow automatic propagation of routes from the attachments into the route table
- E. Configure VPC routing tables to send traffic to the transit gateway.
- F. Create a VPC endpoint service using the centralized application NLB and enable the option to require endpoint authorization
- G. Create a VPC endpoint in each of the business unit VPCs using the service name of the endpoint service
- H. Accept authorized endpoint requests from the endpoint service console.
- I. Create a VPC peering connection from each business unit VPC to the shared VPC
- J. Accept the VPC peering connections from the shared VPC console
- K. Configure VPC routing tables to send traffic to the VPC peering connection.
- L. Configure a virtual private gateway for the shared VPC and create customer gateways for each of the authorized business unit VPCs
- M. Establish a Site-to-Site VPN connection from the business unit VPCs to the shared VPC
- N. Configure VPC routing tables to send traffic to the VPN connection.

**Answer: B**

**Explanation:**

Amazon Transit Gateway doesn't support routing between Amazon VPCs with overlapping CIDRs. If you attach a new Amazon VPC that has a CIDR which overlaps with an already attached Amazon VPC, Amazon Transit Gateway will not propagate the new Amazon VPC route into the Amazon Transit Gateway route table.

<https://docs.aws.amazon.com/elasticloadbalancing/latest/network/load-balancer-target-groups.html#client-ip-ports>

**NEW QUESTION 59**

- (Exam Topic 1)

A solutions architect is designing a network for a new cloud deployment. Each account will need autonomy to modify route tables and make changes. Centralized and controlled egress internet connectivity is also needed. The cloud footprint is expected to grow to thousands of AWS accounts.

Which architecture will meet these requirements?

- A. A centralized transit VPC with a VPN connection to a standalone VPC in each account
- B. Outbound internet traffic will be controlled by firewall appliances.
- C. A centralized shared VPC with a subnet for each account
- D. Outbound internet traffic will be controlled through a fleet of proxy servers.
- E. A shared services VPC to host central assets to include a fleet of firewalls with a route to the internet. Each spoke VPC will peer to the central VPC.
- F. A shared transit gateway to which each VPC will be attached
- G. Outbound internet access will route through a fleet of VPN-attached firewalls.

**Answer: D**

**Explanation:**

<https://docs.aws.amazon.com/whitepapers/latest/building-scalable-secure-multi-vpc-network-infrastructure/centralized-egress/>

<https://docs.aws.amazon.com/whitepapers/latest/building-scalable-secure-multi-vpc-network-infrastructure/centralized-egress/>

AWS Transit Gateway helps you design and implement networks at scale by acting as a cloud router. As your network grows, the complexity of managing

incremental connections can slow you down. AWS Transit Gateway connects VPCs and on-premises networks through a central hub. This simplifies your network and puts an end to complex peering relationships -- each new connection is only made once.

#### NEW QUESTION 60

- (Exam Topic 1)

A financial company is building a system to generate monthly, immutable bank account statements for its users. Statements are stored in Amazon S3. Users should have immediate access to their monthly statements for up to 2 years. Some users access their statements frequently, whereas others rarely access their statements. The company's security and compliance policy requires that the statements be retained for at least 7 years. What is the MOST cost-effective solution to meet the company's needs?

- A. Create an S3 bucket with Object Lock disable
- B. Store statements in S3 Standard
- C. Define an S3 Lifecycle policy to transition the data to S3 Standard-Infrequent Access (S3 Standard-IA) after 30 day
- D. Define another S3 Lifecycle policy to move the data to S3 Glacier Deep Archive after 2 year
- E. Attach an S3 Glacier Vault Lock policy with deny delete permissions for archives less than 7 years old.
- F. Create an S3 bucket with versioning enable
- G. Store statements in S3 Intelligent-Tiering
- H. Use same-Region replication to replicate objects to a backup S3 bucket
- I. Define an S3 Lifecycle policy for the backup S3 bucket to move the data to S3 Glacier
- J. Attach an S3 Glacier Vault Lock policy with deny delete permissions for archives less than 7 years old.
- K. Create an S3 bucket with Object Lock enable
- L. Store statements in S3 Intelligent-Tiering
- M. Enable compliance mode with a default retention period of 2 year
- N. Define an S3 Lifecycle policy to move the data to S3 Glacier after 2 year
- O. Attach an S3 Glacier Vault Lock policy with deny delete permissions for archives less than 7 years old.
- P. Create an S3 bucket with versioning disable
- Q. Store statements in S3 One Zone-Infrequent Access (S3 One Zone-IA). Define an S3 Lifecycle policy to move the data to S3 Glacier Deep Archive after 2 year
- R. Attach an S3 Glacier Vault Lock policy with deny delete permissions for archives less than 7 years old.

**Answer: C**

#### Explanation:

<https://aws.amazon.com/about-aws/whats-new/2018/11/s3-object-lock/>

Create an S3 bucket with Object Lock enabled. Store statements in S3 Intelligent-Tiering. Enable compliance mode with a default retention period of 2 years. Define an S3 Lifecycle policy to move the data to S3 Glacier after 2 years. Attach an S3 Glacier Vault Lock policy with deny delete permissions for archives less than 7 years old.

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

#### NEW QUESTION 65

- (Exam Topic 1)

A company is creating a REST API to share information with six of its partners based in the United States. The company has created an Amazon API Gateway Regional endpoint. Each of the six partners will access the API once per day to post daily sales figures. After initial deployment, the company observes 1,000 requests per second originating from 500 different IP addresses around the world. The company believes this traffic is originating from a botnet and wants to secure its API while minimizing cost. Which approach should the company take to secure its API?

- A. Create an Amazon CloudFront distribution with the API as the origin
- B. Create an AWS WAF web ACL with a rule to block clients that submit more than five requests per day
- C. Associate the web ACL with the CloudFront distribution
- D. Configure CloudFront with an origin access identity (OAI) and associate it with the distribution
- E. Configure API Gateway to ensure only the OAI can execute the POST method.
- F. Create an Amazon CloudFront distribution with the API as the origin
- G. Create an AWS WAF web ACL with a rule to block clients that submit more than five requests per day
- H. Associate the web ACL with the CloudFront distribution
- I. Add a custom header to the CloudFront distribution populated with an API key
- J. Configure the API to require an API key on the POST method.
- K. Create an AWS WAF web ACL with a rule to allow access to the IP addresses used by the six partners. Associate the web ACL with the API
- L. Create a resource policy with a request limit and associate it with the API
- M. Configure the API to require an API key on the POST method.
- N. Associate the web ACL with the API
- O. Create a usage plan with a request limit and associate it with the API
- P. Create an API key and add it to the usage plan.

**Answer: D**

#### Explanation:

"A usage plan specifies who can access one or more deployed API stages and methods—and also how much and how fast they can access them. The plan uses API keys to identify API clients and meters access to the associated API stages for each key. It also lets you configure throttling limits and quota limits that are enforced on individual client API keys."

<https://docs.aws.amazon.com/apigateway/latest/developerguide/api-gateway-api-usage-plans.html>

#### NEW QUESTION 70

- (Exam Topic 1)

A company has a project that is launching Amazon EC2 instances that are larger than required. The project's account cannot be part of the company's organization in AWS Organizations due to policy restrictions to keep this activity outside of corporate IT. The company wants to allow only the launch of t3.small EC2 instances by developers in the project's account. These EC2 instances must be restricted to the us-east-2 Region. What should a solutions architect do to meet these requirements?

- A. Create a new developer account
- B. Move all EC2 instances, users, and assets into us-east-2. Add the account to the company's organization in AWS Organization

- C. Enforce a tagging policy that denotes Region affinity.
- D. Create an SCP that denies the launch of all EC2 instances except I3.small EC2 instances in us-east-2. Attach the SCP to the project's account.
- E. Create and purchase a t3.small EC2 Reserved Instance for each developer in us-east-2. Assign each developer a specific EC2 instance with their name as the tag.
- F. Create an IAM policy than allows the launch of only t3.small EC2 instances in us-east-2. Attach the policy to the roles and groups that the developers use in the project's account.

**Answer:** D

#### NEW QUESTION 74

- (Exam Topic 1)

A solutions architect is building a web application that uses an Amazon RDS for PostgreSQL DB instance. The DB instance is expected to receive many more reads than writes. The solutions architect needs to ensure that the large amount of read traffic can be accommodated and that the DB instance is highly available. Which steps should the solutions architect take to meet these requirements? (Select THREE)

- A. Create multiple read replicas and put them into an Auto Scaling group.
- B. Create multiple read replicas in different Availability Zones.
- C. Create an Amazon Route 53 hosted zone and a record set for each read replica with a TTL and a weighted routing policy.
- D. Create an Application Load Balancer (ALB) and put the read replicas behind the ALB.
- E. Configure an Amazon CloudWatch alarm to detect a failed read replic
- F. Set the alarm to directly invoke an AWS Lambda function to delete its Route 53 record set.
- G. Configure an Amazon Route 53 health check for each read replica using its endpoint

**Answer:** BCF

#### Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/requests-rds-read-replicas/>

You can use Amazon Route 53 weighted record sets to distribute requests across your read replicas. Within a Route 53 hosted zone, create individual record sets for each DNS endpoint associated with your read replicas and give them the same weight. Then, direct requests to the endpoint of the record set. You can incorporate Route 53 health checks to be sure that Route 53 directs traffic away from unavailable read replicas

#### NEW QUESTION 75

- (Exam Topic 1)

A company hosts a web application that runs on a group of Amazon EC2 instances that are behind an Application Load Balancer (ALB) in a VPC. The company wants to analyze the network payloads to reverse-engineer a sophisticated attack of the application. Which approach should the company take to achieve this goal?

- A. Enable VPC Flow Log
- B. Store the flow logs in an Amazon S3 bucket for analysis.
- C. Enable Traffic Mirroring on the network interface of the EC2 instance
- D. Send the mirrored traffic to a target for storage and analysis.
- E. Create an AWS WAF web ACL
- F. and associate it with the ALB
- G. Configure AWS WAF logging.
- H. Enable logging for the ALB
- I. Store the logs in an Amazon S3 bucket for analysis.

**Answer:** A

#### NEW QUESTION 77

- (Exam Topic 1)

A company wants to migrate an application to Amazon EC2 from VMware Infrastructure that runs in an on-premises data center. A solutions architect must preserve the software and configuration settings during the migration. What should the solutions architect do to meet these requirements?

- A. Configure the AWS DataSync agent to start replicating the data store to Amazon FSx for Windows File Server. Use the SMB share to host the VMware data store.
- B. Use VM Import/Export to move the VMs to Amazon EC2.
- C. Use the VMware vSphere client to export the application as an image in Open Virtualization Format (OVF) format. Create an Amazon S3 bucket to store the image in the destination AWS Region.
- D. Create and apply an IAM role for VM Import. Use the AWS CLI to run the EC2 import command.
- E. Configure AWS Storage Gateway for file service to export a Common Internet File System (CIFS) share.
- F. Create a backup copy to the shared folder.
- G. Sign in to the AWS Management Console and create an AMI from the backup copy. Launch an EC2 instance that is based on the AMI.
- H. Create a managed-instance activation for a hybrid environment in AWS Systems Manager.
- I. Download and install Systems Manager Agent on the on-premises VM. Register the VM with Systems Manager to be a managed instance. Use AWS Backup to create a snapshot of the VM and create an AMI.
- J. Launch an EC2 instance that is based on the AMI.

**Answer:** B

#### Explanation:

<https://docs.aws.amazon.com/vm-import/latest/userguide/vmimport-image-import.html>

- Export an OVF Template
- Create / use an Amazon S3 bucket for storing the exported images. The bucket must be in the Region where you want to import your VMs.
- Create an IAM role named vmimport.
- You'll use AWS CLI to run the import commands. <https://aws.amazon.com/premiumsupport/knowledge-center/import-instances/>

#### NEW QUESTION 78

- (Exam Topic 1)

A North American company with headquarters on the East Coast is deploying a new web application running on Amazon EC2 in the us-east-1 Region. The application should dynamically scale to meet user demand and maintain resiliency. Additionally, the application must have disaster recovery capabilities in an active-passive configuration with the us-west-1 Region.

Which steps should a solutions architect take after creating a VPC in the us-east-1 Region?

- A. Create a VPC in the us-west-1 Region
- B. Use inter-Region VPC peering to connect both VPCs
- C. Deploy an Application Load Balancer (ALB) spanning multiple Availability Zones (AZs) to the VPC in the us-east-1 Region
- D. Deploy EC2 instances across multiple AZs in each Region as part of an Auto Scaling group spanning both VPCs and served by the ALB.
- E. Deploy an Application Load Balancer (ALB) spanning multiple Availability Zones (AZs) to the VPC in the us-east-1 Region
- F. Deploy EC2 instances across multiple AZs as part of an Auto Scaling group served by the ALB
- G. Deploy the same solution to the us-west-1 Region Create an Amazon Route 53 record set with a failover routing policy and health checks enabled to provide high availability across both Regions.
- H. Create a VPC in the us-west-1 Region
- I. Use inter-Region VPC peering to connect both VPCs Deploy an Application Load Balancer (ALB) that spans both VPCs Deploy EC2 instances across multiple Availability Zones as part of an Auto Scaling group in each VPC served by the ALB
- J. Create an Amazon Route 53 record that points to the ALB.
- K. Deploy an Application Load Balancer (ALB) spanning multiple Availability Zones (AZs) to the VPC in the us-east-1 Region
- L. Deploy EC2 instances across multiple AZs as part of an Auto Scaling group served by the ALB
- M. Deploy the same solution to the us-west-1 Region
- N. Create separate Amazon Route 53 records in each Region that point to the ALB in the Region
- O. Use Route 53 health checks to provide high availability across both Regions.

**Answer:** B

**Explanation:**

A new web application in a active-passive DR mode. a Route 53 record set with a failover routing policy.

**NEW QUESTION 79**

- (Exam Topic 1)

A company requires that all internal application connectivity use private IP addresses. To facilitate this policy, a solutions architect has created interface endpoints to connect to AWS public services. Upon testing, the solutions architect notices that the service names are resolving to public IP addresses, and that internal services cannot connect to the interface endpoints.

Which step should the solutions architect take to resolve this issue?

- A. Update the subnet route table with a route to the interface endpoint.
- B. Enable the private DNS option on the VPC attributes.
- C. Configure the security group on the interface endpoint to allow connectivity to the AWS services.
- D. Configure an Amazon Route 53 private hosted zone with a conditional forwarder for the internal application.

**Answer:** C

**Explanation:**

<https://docs.aws.amazon.com/vpc/latest/privatelink/vpce-interface.html>

**NEW QUESTION 83**

- (Exam Topic 1)

A company is planning on hosting its ecommerce platform on AWS using a multi-tier web application designed for a NoSQL database. The company plans to use the us-west-2 Region as its primary Region. The company want to ensure that copies of the application and data are available in a second Region, us-west-1, for disaster recovery. The company wants to keep the time to fail over as low as possible. Failing back to the primary Region should be possible without administrative interaction after the primary service is restored.

Which design should the solutions architect use?

- A. Use AWS Cloud Formation StackSets to create the stacks in both Regions with Auto Scaling groups for the web and application tier
- B. Asynchronously replicate static content between Regions using Amazon S3 cross-Region replication
- C. Use an Amazon Route 53 DNS failover routing policy to direct users to the secondary site in us-west-1 in the event of an outage
- D. Use Amazon DynamoDB global tables for the database tier.
- E. Use AWS Cloud Formation StackSets to create the stacks in both Regions with Auto Scaling groups for the web and application tier
- F. Asynchronously replicate static content between Regions using Amazon S3 cross-Region replication
- G. Use an Amazon Route 53 DNS failover routing policy to direct users to the secondary site in us-west-1 in the event of an outage
- H. Deploy an Amazon Aurora global database for the database tier.
- I. Use AWS Service Catalog to deploy the web and application servers in both Region
- J. Asynchronously replicate static content between the two Regions using Amazon S3 cross-Region replication
- K. Use Amazon Route 53 health checks to identify a primary Region failure and update the public DNS entry listing to the secondary Region in the event of an outage
- L. Use Amazon RDS for MySQL with cross-Region replication for the database tier.
- M. Use AWS CloudFormation StackSets to create the stacks in both Regions using Auto Scaling groups for the web and application tier
- N. Asynchronously replicate static content between Regions using Amazon S3 cross-Region replication
- O. Use Amazon CloudFront with static files in Amazon S3, and multi-Region origins for the front-end web tier
- P. Use Amazon DynamoDB tables in each Region with scheduled backups to Amazon S3.

**Answer:** A

**NEW QUESTION 84**

- (Exam Topic 1)

A team collects and routes behavioral data for an entire company The company runs a Multi-AZ VPC environment with public subnets, private subnets, and an internet gateway Each public subnet also contains a NAT gateway Most of the company's applications read from and write to Amazon Kinesis Data Streams. Most of the workloads are in private subnets.

A solutions architect must review the infrastructure The solutions architect needs to reduce costs and maintain the function of the applications The solutions architect uses Cost Explorer and notices that the cost in the EC2-Other category is consistently high A further review shows that NatGateway-Bytes charges are

increasing the cost in the EC2-Other category.

What should the solutions architect do to meet these requirements?

- A. Enable VPC Flow Log
- B. Use Amazon Athena to analyze the logs for traffic that can be remove
- C. Ensure that security groups are Mocking traffic that is responsible for high costs.
- D. Add an interface VPC endpoint for Kinesis Data Streams to the VP
- E. Ensure that applications have the correct IAM permissions to use the interface VPC endpoint.
- F. Enable VPC Flow Logs and Amazon Detective Review Detective findings for traffic that is not related to Kinesis Data Streams Configure security groups to block that traffic
- G. Add an interface VPC endpoint for Kinesis Data Streams to the VP
- H. Ensure that the VPC endpoint policy allows traffic from the applications.

**Answer:** D

**Explanation:**

<https://docs.aws.amazon.com/vpc/latest/privatelink/vpc-endpoints-access.html>

<https://aws.amazon.com/premiumsupport/knowledge-center/vpc-reduce-nat-gateway-transfer-costs/>

VPC endpoint policies enable you to control access by either attaching a policy to a VPC endpoint or by using additional fields in a policy that is attached to an IAM user, group, or role to restrict access to only occur via the specified VPC endpoint

**NEW QUESTION 86**

- (Exam Topic 1)

A company is running an application on Amazon EC2 instances in three environments; development, testing, and production. The company uses AMIs to deploy the EC2 instances. The company builds the AMIs by using custom deployment scripts and infrastructure orchestration tools for each release in each environment. The company is receiving errors in its deployment process. Errors appear during operating system package downloads and during application code installation from a third-party Git hosting service. The company needs deployments to become more reliable across all environments.

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

- A. Mirror the application code to an AWS CodeCommit Git repositior
- B. Use the repository to build EC2 AMIs.
- C. Produce multiple EC2 AMI
- D. one for each environment, for each release.
- E. Produce one EC2 AMI for each release for use across all environments.
- F. Mirror the application code to a third-party Git repository that uses Amazon S3 storag
- G. Use therepository for deployment.
- H. Replace the custom scripts and tools with AWS CodeBuil
- I. Update the infrastructure deployment process to use EC2 Image Builder.

**Answer:** ACE

**NEW QUESTION 88**

- (Exam Topic 1)

A solutions architect at a largo company needs to set up network security for outbound traffic to the internet from all AWS accounts within an organization m AWS Organizations The organization has more than 100 AWS accounts, and the accounts route to each other by using a centralized AWS Transit Gateway. Each account has both an internet gateway and a NAT gateway for outbound traffic to the interne) The company deploys resources only Into a single AWS Region The company needs the ability to add centrally managed rule-based filtering on all outbound traffic to the internet for all AWS accounts in the organization The peak load of outbound traffic will not exceed 25 Gbps in each Availability Zone

Which solution meets these requirements?

- A. Creates a new VPC for outbound traffic to the internet Connect the existing transit gateway to the new VPC Configure a new NAT gateway Create an Auto Scaling group of Amazon EC2 Instances that run an open-source internet proxy for rule-based filtering across all Availability Zones in the Region Modify all default routes to point to the proxy's Auto Scaling group
- B. Create a new VPC for outbound traffic to the internet Connect the existing transit gateway to the new VPC Configure a new NAT gateway Use an AWS Network Firewall firewall for rule-based filtering Create Network Firewall endpoints In each Availability Zone Modify all default routes to point to the Network Firewall endpoints
- C. Create an AWS Network Firewall firewal for rule-based filtering in each AWS account Modify all default routes to point to the Network Firewall firewalls in each account.
- D. In each AWS account, create an Auto Scaling group of network-optimized Amazon EC2 instances that run an open-source internet proxy for rule-based filtering Modify all default routes to point to the proxy's Auto Scaling group.

**Answer:** B

**Explanation:**

<https://aws.amazon.com/blogs/networking-and-content-delivery/deployment-models-for-aws-network-firewall/>

<https://aws.amazon.com/blogs/networking-and-content-delivery/deploy-centralized-traffic-filtering-using-aws-n>

**NEW QUESTION 93**

- (Exam Topic 1)

A company is hosting a single-page web application in the AWS Cloud. The company is using Amazon CloudFront to reach its goal audience. The CloudFront distribution has an Amazon S3 bucket that is configured as its origin. The static files for the web application are stored in this S3 bucket.

The company has used a simple routing policy to configure an Amazon Route 53 A record The record points to the CloudFront distribution The company wants to use a canary deployment release strategy for new versions of the application.

What should a solutions architect recommend to meet these requirements?

- A. Create a second CloudFront distribution for the new version of the applicatio
- B. Update the Route 53 record to use a weighted routing policy.
- C. Create a Lambda@Edge functio
- D. Configure the function to implement a weighting algorithm and rewrite the URL to direct users to a new version of the application.
- E. Create a second S3 bucket and a second CloudFront origin for the new S3 bucket Create a CloudFrontorigin group that contains both origins Configure origin

weighting for the origin group.

F. Create two Lambda@Edge function

G. Use each function to serve one of the application versions Set up a CloudFront weighted Lambda@Edge invocation policy

**Answer:** A

#### NEW QUESTION 98

- (Exam Topic 2)

A company hosts a blog post application on AWS using Amazon API Gateway, Amazon DynamoDB, and AWS Lambda The application currently does not use API keys to authorize requests The API model is as follows:

GET /posts/{postId} to get post details

GET /users/{userId}. to get user details

GET /comments/{commentId}: to get comments details

The company has noticed users are actively discussing topics in the comments section, and the company wants to increase user engagement by making the comments appear in real time

Which design should be used to reduce comment latency and improve user experience?

- A. Use edge-optimized API with Amazon CloudFront to cache API responses.
- B. Modify the blog application code to request GET/commentsV{commentId} every 10 seconds
- C. Use AWS AppSync and leverage WebSockets to deliver comments
- D. Change the concurrency limit of the Lambda functions to lower the API response time.

**Answer:** C

#### NEW QUESTION 102

- (Exam Topic 2)

A company that develops consumer electronics with offices in Europe and Asia has 60 TB of software images stored on premises in Europe. The company wants to transfer the images to an Amazon S3 bucket in the ap-northeast-1 Region. New software images are created daily and must be encrypted in transit. The company needs a solution that does not require custom development to automatically transfer all existing and new software images to Amazon S3.

What is the next step in the transfer process?

- A. Deploy an AWS DataSync agent and configure a task to transfer the images to the S3 bucket.
- B. Configure Amazon Kinesis Data Firehose to transfer the images using S3 Transfer Acceleration.
- C. Use an AWS Snowball device to transfer the images with the S3 bucket as the target.
- D. Transfer the images over a Site-to-Site VPN connection using the S3 API with multipart upload.

**Answer:** A

#### NEW QUESTION 104

- (Exam Topic 2)

A company that runs applications on AWS recently subscribed to a new software-as-a-service (SaaS) data vendor. The vendor provides the data by way of a REST API that the vendor hosts in its AWS environment The vendor offers multiple options for connectivity to the API and is working with the company to find the best way to connect.

The company's AWS account does not allow outbound internet access from its AWS environment The vendor's services run on AWS in the same AWS Region as the company's applications

A solutions architect must implement connectivity to the vendor's API so that the API is highly available In the company's VPC.

Which solution will meet these requirements?

- A. Connect to the vendor's public API address for the data service.
- B. Connect to the vendor by way of a VPC peering connection between the vendor's VPC and the company's VPC
- C. Connect to the vendor by way of a VPC endpoint service that uses AWS PrivateLink
- D. Connect to a public bastion host that the vendor provides Tunnel the API traffic.

**Answer:** C

#### NEW QUESTION 105

- (Exam Topic 2)

A company runs a proprietary stateless ETL application on an Amazon EC2 Linux instance. The application is a Linux binary, and the source code cannot be modified. The application is single-threaded, uses 2 GB of RAM, and is highly CPU intensive The application is scheduled to run every 4 hours and runs for up to 20 minutes A solutions architect wants to revise the architecture for the solution.

Which strategy should the solutions architect use?

- A. Use AWS Lambda to run the applicatio
- B. Use Amazon CloudWatch Logs to invoke the Lambda function every 4 hours
- C. Use AWS Batch to run the application Use an AWS Step Functions state machine to invoke the AWS Batch job every 4 hours
- D. Use AWS Fargate to run the application Use Amazon EventBridge (Amazon CloudWatch Events) to invoke the Fargate task every 4 hours
- E. Use Amazon EC2 Spot Instances to run the application Use AWS CodeDeploy to deploy and run the application every 4 hours.

**Answer:** C

#### NEW QUESTION 109

- (Exam Topic 2)

A company wants to migrate its workloads from on premises to AWS. The workloads run on Linux and Windows. The company has a large on-premises infrastructure that consists of physical machines and VMs that host numerous applications.

The company must capture details about the system configuration, system performance, running processes and network configurations of its on-premises servers. The company also must divide the on-premises applications into groups for AWS migrations. The company needs recommendations for Amazon EC2 instance types so that the company can run its workloads on AWS in the most cost-effective manner.

Which combination of steps should a solutions architect take to meet these requirements? (Select THREE.)

- A. Assess the existing applications by installing AWS Application Discovery Agent on the physical machines and VMs.
- B. Assess the existing applications by installing AWS Systems Manager Agent on the physical machines and VMs
- C. Group servers into applications for migration by using AWS Systems Manager Application Manager.
- D. Group servers into applications for migration by using AWS Migration Hub.
- E. Generate recommended instance types and associated costs by using AWS Migration Hub.
- F. Import data about server sizes into AWS Trusted Advisor
- G. Follow the recommendations for cost optimization.

**Answer:** BDF

#### NEW QUESTION 113

- (Exam Topic 2)

A large company has many business units. Each business unit has multiple AWS accounts for different purposes. The CIO of the company sees that each business unit has data that would be useful to share with other parts of the company. In total, there are about 10 PB of data that needs to be shared with users in 1,000 AWS accounts. The data is proprietary, so some of it should only be available to users with specific job types. Some of the data is used for throughput of intensive workloads such as simulations. The number of accounts changes frequently because of new initiatives, acquisitions, and divestitures. A solutions architect has been asked to design a system that will allow for sharing data for use in AWS with all of the employees in the company. Which approach will allow for secure data sharing in a scalable way?

- A. Store the data in a single Amazon S3 bucket. Create an IAM role for every combination of job type and business unit that allows for appropriate read/write access based on object prefixes in the S3 bucket. The roles should have trust policies that allow the business unit's AWS accounts to assume their roles. Use IAM in each business unit's AWS account to prevent them from assuming roles for a different job type. Users get credentials to access the data by using AssumeRole from their business unit's AWS account. Users can then use those credentials with an S3 client.
- B. Store the data in a single Amazon S3 bucket. Write a bucket policy that uses conditions to grant read and write access where appropriate based on each user's business unit and job type.
- C. Determine the business unit with the AWS account accessing the bucket and the job type with a prefix in the IAM user's name. Users can access data by using IAM credentials from their business unit's AWS account with an S3 client.
- D. Store the data in a series of Amazon S3 buckets. Create an application running on Amazon EC2 that is integrated with the company's identity provider (IdP) that authenticates users and allows them to download or upload data through the application. The application uses the business unit and job type information in the IdP to control what users can upload and download through the application. The users can access the data through the application's API.
- E. Store the data in a series of Amazon S3 buckets. Create an AWS STS token vending machine that is integrated with the company's identity provider (IdP). When a user logs in, have the token vending machine attach an IAM policy that assumes the role that limits the user's access and/or upload only the data the user is authorized to access. Users can get credentials by authenticating to the token vending machine's website or API and then use those credentials with an S3 client.
- F. D

**Answer:** E

#### NEW QUESTION 116

- (Exam Topic 2)

A company is migrating an on-premises application and a MySQL database to AWS. The application processes highly sensitive data, and new data is constantly updated in the database. The data must not be transferred over the internet. The company also must encrypt the data in transit and at rest. The database is 5 TB in size. The company already has created the database schema in an Amazon RDS for MySQL DB instance. The company has set up a 1 Gbps AWS Direct Connect connection to AWS. The company also has set up a public VIF and a private VIF. A solutions architect needs to design a solution that will migrate the data to AWS with the least possible downtime. Which solution will meet these requirements?

- A. Perform a database backup.
- B. Copy the backup files to an AWS Snowball Edge Storage Optimized device. Import the backup to Amazon S3. Use server-side encryption with Amazon S3 managed encryption keys (SSE-S3) for encryption at rest. Use TLS for encryption in transit. Import the data from Amazon S3 to the DB instance.
- C. Use AWS Database Migration Service (AWS DMS) to migrate the data to AWS.
- D. Create a DMS replication instance in a private subnet.
- E. Create VPC endpoints for AWS DMS.
- F. Configure a DMS task to copy data from the on-premises database to the DB instance by using full load plus change data capture (CDC). Use the AWS Key Management Service (AWS KMS) default key for encryption at rest.
- G. Use TLS for encryption in transit.
- H. Perform a database backup.
- I. Use AWS DataSync to transfer the backup files to Amazon S3. Use server-side encryption with Amazon S3 managed encryption keys (SSE-S3) for encryption at rest.
- J. Use TLS for encryption in transit. Import the data from Amazon S3 to the DB instance.
- K. Use Amazon S3 File Gateway. Set up a private connection to Amazon S3 by using AWS PrivateLink. Perform a database backup.
- L. Copy the backup files to Amazon S3. Use server-side encryption with Amazon S3 managed encryption keys (SSE-S3) for encryption at rest.
- M. Use TLS for encryption in transit.
- N. Import the data from Amazon S3 to the DB instance.

**Answer:** D

#### NEW QUESTION 117

- (Exam Topic 2)

A company has developed a web application. The company is hosting the application on a group of Amazon EC2 instances behind an Application Load Balancer. The company wants to improve the security posture of the application and plans to use AWS WAF web ACLs. The solution must not adversely affect legitimate traffic to the application. How should a solutions architect configure the web ACLs to meet these requirements?

- A. Set the action of the web ACL rules to Count.
- B. Enable AWS WAF logging. Analyze the requests for false positives. Modify the rules to avoid any false positives. Over time, change the action of the web ACL rules from Count to Block.
- C. Use only rate-based rules in the web ACL.
- D. and set the throttle limit as high as possible. Temporarily block all requests that exceed the limit.
- E. Define nested rules to narrow the scope of the rate tracking.
- F. Set the action of the web ACL rules to Block.

- G. Use only AWS managed rule groups in the web ACLs Evaluate the rule groups by using Amazon CloudWatch metrics with AWS WAF sampled requests or AWS WAF logs.
- H. Use only custom rule groups in the web ACL
- I. and set the action to Allow Enable AWS WAF logging Analyze the requests for false positives Modify the rules to avoid any false positive Over time, change the action of the web ACL rules from Allow to Block.

**Answer: B**

#### NEW QUESTION 120

- (Exam Topic 2)

A company has a web application that allows users to upload short videos. The videos are stored on Amazon EBS volumes and analyzed by custom recognition software for categorization.

The website contains static content that has variable traffic with peaks in certain months. The architecture consists of Amazon EC2 instances running in an Auto Scaling group for the web application and EC2 instances running in an Auto Scaling group to process an Amazon SQS queue The company wants to re-architect the application to reduce operational overhead using AWS managed services where possible and remove dependencies on third-party software. Which solution meets these requirements?

- A. Use Amazon ECS containers for the web application and Spot Instances for the Auto Scaling group that processes the SQS queue
- B. Replace the custom software with Amazon Rekognition to categorize the videos.
- C. Store the uploaded videos in Amazon EFS and mount the file system to the EC2 instances for the web application
- D. Process the SQS queue with an AWS Lambda function that calls the Amazon Rekognition API to categorize the videos.
- E. Host the web application in Amazon S3. Store the uploaded videos in Amazon S3. Use S3 event notifications to publish events to the SQS queue Process the SQS queue with an AWS Lambda function that calls the Amazon Rekognition API to categorize the videos.
- F. Use AWS Elastic Beanstalk to launch EC2 instances in an Auto Scaling group for the web application and launch a worker environment to process the SQS queue Replace the custom software with Amazon Rekognition to categorize the videos.

**Answer: D**

#### NEW QUESTION 122

- (Exam Topic 2)

A company has deployed an application to multiple environments in AWS, including production and testing the company has separate accounts for production and testing, and users are allowed to create additional

application users for team members or services, as needed. The security team has asked the operations team for better isolation between production and testing with centralized controls on security credentials and improved management of permissions between environments Which of the following options would MOST securely accomplish this goal?

- A. Create a new AWS account to hold user and service accounts, such as an identity account Create users and groups in the identity account
- B. Create roles with appropriate permissions in the production and testing accounts Add the identity account to the trust policies for the roles
- C. Modify permissions in the production and testing accounts to limit creating new IAM users to members of the operations team Set a strong IAM password policy on each account Create new IAM users and groups in each account to Limit developer access to just the services required to complete their job function.
- D. Create a script that runs on each account that checks user accounts For adherence to a security policy. Disable any user or service accounts that do not comply.
- E. Create all user accounts in the production account Create roles for access in the production account and testing account
- F. Grant cross-account access from the production account to the testing account

**Answer: A**

#### NEW QUESTION 123

- (Exam Topic 2)

A Solutions Architect is constructing a containerized .NET Core application for AWS Fargate. The application's backend needs a high-availability version of Microsoft SQL Server. All application levels must be extremely accessible. The credentials associated with the SQL Server connection string should not be saved to disk inside the .NET Core front-end containers.

Which tactics should the Solutions Architect use to achieve these objectives?

- A. Set up SQL Server to run in Fargate with Service Auto Scaling
- B. Create an Amazon ECS task execution role that allows the Fargate task definition to get the secret value for the credentials to SQL Server running in Fargate
- C. Specify the ARN of the secret in AWS Secrets Manager in the secrets section of the Fargate task definition so the sensitive data can be injected into the containers as environment variables on startup for reading into the application to construct the connection string
- D. Set up the .NET Core service using Service Auto Scaling behind an Application Load Balancer in multiple Availability Zones.
- E. Create a Multi-AZ deployment of SQL Server on Amazon RDS
- F. Create a secret in AWS Secrets Manager for the credentials to the RDS database
- G. Create an Amazon ECS task execution role that allows the Fargate task definition to get the secret value for the credentials to the RDS database in Secrets Manager
- H. Specify the ARN of the secret in Secrets Manager in the secrets section of the Fargate task definition so the sensitive data can be injected into the containers as environment variables on startup for reading into the application to construct the connection string
- I. Set up the .NET Core service in Fargate using Service Auto Scaling behind an Application Load Balancer in multiple Availability Zones.
- J. Create an Auto Scaling group to run SQL Server on Amazon EC2. Create a secret in AWS Secrets Manager for the credentials to SQL Server running on EC2. Create an Amazon ECS task execution role that allows the Fargate task definition to get the secret value for the credentials to SQL Server on EC2. Specify the ARN of the secret in Secrets Manager in the secrets section of the Fargate task definition so the sensitive data can be injected into the containers as environment variables on startup for reading into the application to construct the connection string
- K. Set up the .NET Core service using Service Auto Scaling behind an Application Load Balancer in multiple Availability Zones.
- L. Create a Multi-AZ deployment of SQL Server on Amazon RDS
- M. Create a secret in AWS Secrets Manager for the credentials to the RDS database
- N. Create non-persistent empty storage for the .NET Core containers in the Fargate task definition to store the sensitive information
- O. Create an Amazon ECS task execution role that allows the Fargate task definition to get the secret value for the credentials to the RDS database in Secrets Manager
- P. Specify the ARN of the secret in Secrets Manager in the secrets section of the Fargate task definition so the sensitive data can be written to the non-persistent empty storage on startup for reading into the application to construct the connection string
- Q. Set up the .NET Core service using Service Auto Scaling behind an Application Load Balancer in multiple Availability Zones.

**Answer: B**

**Explanation:**

Secrets Manager natively supports SQL Server on RDS. No real need to create additional 'ephemeral storage' to fetch credentials, as these can be injected to containers as environment variables. <https://aws.amazon.com/premiumsupport/knowledge-center/ecs-data-security-container-task/>

**NEW QUESTION 125**

- (Exam Topic 2)

A solutions architect uses AWS Organizations to manage several AWS accounts for a company. The full Organizations feature set is activated for the organization. All production AWS accounts exist under an OU that is named "production". Systems operators have full administrative privileges within these accounts by using IAM roles.

The company wants to ensure that security groups in all production accounts do not allow inbound traffic for TCP port 22. All noncompliant security groups must be remediated immediately, and no new rules that allow port 22 can be created.

Which solution will meet these requirements?

- A. Write an SCP that denies the CreateSecurityGroup action with a condition of (ec2:ingress rule with value 22. Apply the SCP to the 'production' OU.
- B. Configure an AWS CloudTrail trail for all accounts. Send CloudTrail logs to an Amazon S3 bucket in the Organizations management account.
- C. Configure an AWS Lambda function on the management account with permissions to assume a role in all production accounts to describe and modify security group.
- D. Configure Amazon S3 to invoke the Lambda function on every PutObject event on the S3 bucket. Configure the Lambda function to analyze each CloudTrail event for noncompliant security group actions and to automatically remediate any issues.
- E. Create an Amazon EventBridge (Amazon CloudWatch Events) event bus in the Organizations management account.
- F. Create an AWS CloudFormation template to deploy configurations that send CreateSecurityGroup events to the event bus from all production accounts. Configure an AWS Lambda function in the management account with permissions to assume a role in all production accounts to describe and modify security group.
- G. Configure the event bus to invoke the Lambda function. Configure the Lambda function to analyze each event for noncompliant security group actions and to automatically remediate any issues.
- H. Create an AWS CloudFormation template to turn on AWS Config. Activate the INCOMING\_SSH\_DISABLED AWS Config managed rule. Deploy an AWS Lambda function that will run based on AWS Config findings and will remediate noncompliant resources. Deploy the CloudFormation template by using a StackSet that is assigned to the "production" OU.
- I. Apply an SCP to the OU to deny modification of the resources that the CloudFormation template provisions.

**Answer: D**

**NEW QUESTION 129**

- (Exam Topic 2)

A company is migrating its data center from on-premises to the AWS Cloud. The migration will take several months to complete. The company will use Amazon Route 53 for private DNS zones.

During the migration, the company must keep its AWS services pointed at the VPC's Route 53 Resolver for DNS. The company also must maintain the ability to resolve addresses from its on-premises DNS server. A solutions architect must set up DNS so that Amazon EC2 instances can use native Route 53 endpoints to resolve on-premises DNS queries.

Which configuration will meet these requirements?

- A. Configure the VPC DHCP options set to point to on-premises DNS server IP addresses.
- B. Ensure that security groups for EC2 instances allow outbound access to port 53 on those DNS server IP addresses.
- C. Launch an EC2 instance that has DNS BIND installed and configured.
- D. Ensure that the security groups that are attached to the EC2 instance can access the on-premises DNS server IP address on port 53. Configure BIND to forward DNS queries to on-premises DNS server IP addresses. Configure each migrated EC2 instance's DNS settings to point to the BIND server IP address.
- E. Create a new outbound endpoint in Route 53 and attach the endpoint to the VPC.
- F. Ensure that the security groups that are attached to the endpoint can access the on-premises DNS server IP address on port 53. Create a new Route 53 Resolver rule that routes on-premises designated traffic to the on-premises DNS server.
- G. Create a new private DNS zone in Route 53 with the same domain name as the on-premises domain. Create a single wildcard record with the on-premises DNS server IP address as the record's address.

**Answer: A**

**NEW QUESTION 133**

- (Exam Topic 2)

A company has an on-premises Microsoft SQL Server database that writes a nightly 200 GB export to a local drive. The company wants to move the backups to more robust cloud storage on Amazon S3. The company has set up a 10 Gbps AWS Direct Connect connection between the on-premises data center and AWS. Which solution meets these requirements most cost effectively?

- A. Create a new S3 bucket. Deploy an AWS Storage Gateway file gateway within the VPC that is connected to the Direct Connect connection.
- B. Create a new SMB file share.
- C. Write nightly database exports to the new SMB file share.
- D. Create an Amazon FSx for Windows File Server Single-AZ file system within the VPC that is connected to the Direct Connect connection.
- E. Create a new SMB file share.
- F. Write nightly database exports to an SMB file share on the Amazon FSx file system. Enable backups.
- G. Create an Amazon FSx for Windows File Server Multi-AZ system within the VPC that is connected to the Direct Connect connection.
- H. Create a new SMB file share.
- I. Write nightly database exports to an SMB file share on the Amazon FSx file system.
- J. Enable nightly backups.
- K. Create a new S3 bucket.
- L. Deploy an AWS Storage Gateway volume gateway within the VPC that is connected to the Direct Connect connection.
- M. Create a new SMB file share.
- N. Write nightly database exports to the new SMB file share on the volume gateway, and automate copies of this data to an S3 bucket.

**Answer: A**

**NEW QUESTION 136**

- (Exam Topic 2)

A company is running a workload that consists of thousands of Amazon EC2 instances. The workload is running in a VPC that contains several public subnets and private subnets. The public subnets have a route for 0.0.0.0/0 to an existing internet gateway. The private subnets have a route for 0.0.0.0/0 to an existing NAT gateway.

A solutions architect needs to migrate the entire fleet of EC2 instances to use IPv6. The EC2 instances that are in private subnets must not be accessible from the public internet.

What should the solutions architect do to meet these requirements?

- A. Update the existing VPC and associate a custom IPv6 CIDR block with the VPC and all subnets. Update all the VPC route tables and add a route for /0 to the internet gateway.
- B. Update the existing VPC and associate an Amazon-provided IPv6 CIDR block with the VPC and all subnets. Update the VPC route tables for all private subnets, and add a route for /0 to the NAT gateway.
- C. Update the existing VPC and associate an Amazon-provided IPv6 CIDR block with the VPC and all subnets. Update the VPC route tables for all private subnets, and add a route for /0 to the NAT gateway.
- D. Update the existing VPC and associate an Amazon-provided IPv6 CIDR block with the VPC and all subnets. Create an egress-only internet gateway. Update the VPC route tables for all private subnets, and add a route for /0 to the egress-only internet gateway.
- E. Update the existing VPC and associate a custom IPv6 CIDR block with the VPC and all subnets. Create a new NAT gateway, and enable IPv6 support. Update the VPC route tables for all private subnets and add a route for /0 to the IPv6-enabled NAT gateway.

**Answer: C**

#### NEW QUESTION 141

- (Exam Topic 2)

A company is running an application in the AWS Cloud. The company's security team must approve the creation of all new IAM users. When a new IAM user is created, all access for the user must be removed automatically. The security team must then receive a notification to approve the user. The company has a multi-Region AWS CloudTrail trail in the AWS account.

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

- A. Create an Amazon EventBridge (Amazon CloudWatch Events) rule.
- B. Define a pattern with the detail-type value set to AWS API Call via CloudTrail and an eventName of CreateUser.
- C. Configure CloudTrail to send a notification for the CreateUser event to an Amazon Simple Notification Service (Amazon SNS) topic.
- D. Invoke a container that runs in Amazon Elastic Container Service (Amazon ECS) with AWS Fargate technology to remove access.
- E. Invoke an AWS Step Functions state machine to remove access.
- F. Use Amazon Simple Notification Service (Amazon SNS) to notify the security team.
- G. Use Amazon Pinpoint to notify the security team.

**Answer: ABE**

#### NEW QUESTION 143

- (Exam Topic 2)

A company recently deployed a new application that runs on a group of Amazon EC2 Linux instances in a VPC. In a peered VPC, the company launched an EC2 Linux instance that serves as a bastion host. The security group of the application instances allows access only on TCP port 22 from the private IP of the bastion host. The security group of the bastion host allows access to TCP port 22 from 0.0.0.0/0 so that system administrators can use SSH to remotely log in to the application instances from several branch offices.

While looking through operating system logs on the bastion host, a cloud engineer notices thousands of failed SSH logins to the bastion host from locations around the world. The cloud engineer wants to change how remote access is granted to the application instances and wants to meet the following requirements:

- Eliminate brute-force SSH login attempts.
- Retain a log of commands run during an SSH session.
- Retain the ability to forward ports.

Which solution meets these requirements for remote access to the application instances?

- A. Configure the application instances to communicate with AWS Systems Manager. Grant access to the system administrators to use Session Manager to establish a session with the application instances. Terminate the bastion host.
- B. Update the security group of the bastion host to allow traffic from only the public IP addresses of the branch offices.
- C. Configure an AWS Client VPN endpoint and provision each system administrator with a certificate to establish a VPN connection to the application VPC. Update the security group of the application instances to allow traffic from only the Client VPN IPv4 CIDR.
- D. Terminate the bastion host.
- E. Configure the application instances to communicate with AWS Systems Manager.
- F. Grant access to the system administrators to issue commands to the application instances by using Systems Manager Run Command.
- G. Terminate the bastion host.

**Answer: A**

#### Explanation:

"Session Manager removes the need to open inbound ports, manage SSH keys, or use bastion hosts." Ref: <https://docs.aws.amazon.com/systems-manager/latest/userguide/session-manager.html>

#### NEW QUESTION 144

- (Exam Topic 2)

A company is running its solution on AWS in a manually created VPC. The company is using AWS CloudFormation to provision other parts of the infrastructure. According to a new requirement, the company must manage all infrastructure in an automatic way.

What should the company do to meet this new requirement with the LEAST effort?

- A. Create a new AWS Cloud Development Kit (AWS CDK) stack that strictly provisions the existing VPC resources and configuration.
- B. Use AWS CDK to import the VPC into the stack and to manage the VPC.
- C. Create a CloudFormation stack set that creates the VPC.
- D. Use the stack set to import the VPC into the stack.
- E. Create a new CloudFormation template that strictly provisions the existing VPC resources and configuration.
- F. From the CloudFormation console, create a new stack by importing the existing resources.
- G. Create a new CloudFormation template that creates the VPC.
- H. Use the AWS Serverless Application Model (AWS SAM) CLI to import the VPC.

**Answer:** D

**NEW QUESTION 146**

- (Exam Topic 2)

A company is planning to migrate an application from on premises to AWS. The application currently uses an Oracle database and the company can tolerate a brief downtime of 1 hour when performing the switch to the new infrastructure. As part of the migration, the database engine will be changed to MySQL. A solutions architect needs to determine which AWS services can be used to perform the migration while minimizing the amount of work and time required. Which of the following will meet the requirements?

- A. Use AWS SCT to generate the schema scripts and apply them on the target prior to migration. Use AWS DMS to analyse the current schema and provide a recommendation for the optimal database engine. Then, use AWS DMS to migrate to the recommended engine. Use AWS SCT to identify what embedded SQL code in the application can be converted and what has to be done manually.
- B. Use AWS SCT to generate the schema scripts and apply them on the target prior to migration.
- C. Use AWS DMS to begin moving data from the on-premises database to AWS.
- D. After the initial copy, continue to use AWS DMS to keep the databases in sync until cutting over to the new database. Use AWS SCT to identify what embedded SQL code in the application can be converted and what has to be done manually.
- E. Use AWS DMS to help identify the best target deployment between installing the database engine on Amazon EC2 directly or moving to Amazon RDS.
- F. Then, use AWS DMS to migrate to the platform.
- G. Use AWS Application Discovery Service to identify what embedded SQL code in the application can be converted and what has to be done manually.
- H. Use AWS DMS to begin moving data from the on-premises database to AWS. After the initial copy, continue to use AWS DMS to keep the databases in sync until cutting over to the new database. Use AWS Application Discovery Service to identify what embedded SQL code in the application can be converted and what has to be done manually.

**Answer:** B

**NEW QUESTION 151**

- (Exam Topic 2)

A company is running a serverless application that consists of several AWS Lambda functions and Amazon DynamoDB tables. The company has created new functionality that requires the Lambda functions to access an Amazon Neptune DB cluster. The Neptune DB cluster is located in three subnets in a VPC. Which of the possible solutions will allow the Lambda functions to access the Neptune DB cluster and DynamoDB tables? (Select TWO)

- A. Create three public subnets in the Neptune VPC and route traffic through an internet gateway. Host the Lambda functions in the three new public subnets.
- B. Create three private subnets in the Neptune VPC and route internet traffic through a NAT gateway. Host the Lambda functions in the three new private subnets.
- C. Host the Lambda functions outside the VPC.
- D. Update the Neptune security group to allow access from the IP ranges of the Lambda functions.
- E. Host the Lambda functions outside the VPC.
- F. Create a VPC endpoint for the Neptune database, and have the Lambda functions access Neptune over the VPC endpoint.
- G. Create three private subnets in the Neptune VPC.
- H. Host the Lambda functions in the three new isolated subnets.
- I. Create a VPC endpoint for DynamoDB.
- J. and route DynamoDB traffic to the VPC endpoint.

**Answer:** AC

**NEW QUESTION 154**

- (Exam Topic 2)

A company plans to refactor a monolithic application into a modern application designed for deployment on AWS. The CI/CD pipeline needs to be upgraded to support the modern design for the application with the following requirements:

- It should allow changes to be released several times every hour.
- \* It should be able to roll back the changes as quickly as possible. Which design will meet these requirements?

- A. Deploy a CI-CD pipeline that incorporates AMIs to contain the application and their configurations. Deploy the application by replacing Amazon EC2 instances.
- B. Specify AWS Elastic Beanstalk to serve as a secondary environment as the deployment target for the CI/CD pipeline of the application.
- C. To deploy, swap the staging and production environment URLs.
- D. Use AWS Systems Manager to re-provision the infrastructure for each deployment. Update the Amazon EC2 user data to pull the latest code artifact from Amazon S3 and use Amazon Route 53 weighted routing to point to the new environment.
- E. Roll out application updates as part of an Auto Scaling event using prebuilt AMI.
- F. Use new versions of the AMIs to add instances, and phase out all instances that use the previous AMI version with the configured termination policy during a deployment event.

**Answer:** B

**Explanation:**

It is the fastest when it comes to rollback and deploying changes every hour.

**NEW QUESTION 157**

- (Exam Topic 2)

A company's CISO has asked a solutions architect to re-engineer the company's current CI/CD practices to make sure patch deployments to its application can happen as quickly as possible with minimal downtime if vulnerabilities are discovered. The company must also be able to quickly roll back a change in case of errors.

The web application is deployed in a fleet of Amazon EC2 instances behind an Application Load Balancer. The company is currently using GitHub to host the application source code, and has configured an AWS CodeBuild project to build the application. The company also intends to use AWS CodePipeline to trigger builds from GitHub commits using the existing CodeBuild project.

What CI/CD configuration meets all of the requirements?

- A. Configure CodePipeline with a deploy stage using AWS CodeDeploy configured for in-place deployment. Monitor the newly deployed code, and, if there are any issues, push another code update.
- B. Configure CodePipeline with a deploy stage using AWS CodeDeploy configured for blue/green deployments. Monitor the newly deployed code and if there are any issues, trigger a manual rollback using CodeDeploy.

- C. Configure CodePipeline with a deploy stage using AWS CloudFormation to create a pipeline for test and production stacks Monitor the newly deployed code, and, if there are any issues, push another code update
- D. Configure the CodePipeline with a deploy stage using AWS OpsWorks and m-place deployments Monitor the newly deployed code an
- E. if there are any issues, push another code update

**Answer: B**

#### NEW QUESTION 158

- (Exam Topic 2)

A company manages hundreds of AWS accounts centrally in an organization In AWS Organizations. The company recently started to allow product teams to create and manage their own S3 access points in their accounts. The S3 access points can be accessed only within VPCs. not on the internet. What is the MOST operationally efficient way to enforce this requirement?

- A. Set the S3 access point resource policy to deny the s3CreateAccessPoint action unless the s3 AccessPointNetworkOrigin condition key evaluates to VPC.
- B. Create an SCP at the root level in the organization to deny the s3: Create Access Point action unless the s3:AccessPointNetworkOrigin condition key evaluates to VPC.
- C. Use AWS Cloud Formation StackSets to create a new IAM policy In each AWS account that allows the s3:CreateAccessPoint action only if the s3:AccessPointNetworkOrigin condition key evaluates to VPC.
- D. Set the S3 bucket policy to deny the s3:CreateAccessPoint action unless the s3: AccessPointNetworkOrigin condition key evaluates to VPC.

**Answer: A**

#### NEW QUESTION 161

- (Exam Topic 2)

A company's site reliability engineer is performing a review of Amazon FSx for Windows File Server deployments within an account that the company acquired Company policy states that all Amazon FSx file systems must be configured to be highly available across Availability Zones.

During the review, the site reliability engineer discovers that one of the Amazon FSx file systems used a deployment type of Single-AZ 2 A solutions architect needs to minimize downtime while aligning this Amazon FSx file system with company policy.

What should the solutions architect do to meet these requirements?

- A. Reconfigure the deployment type to Multi-AZ for this Amazon FSx tile system
- B. Create a new Amazon FSx fie system with a deployment type o( Multi-A
- C. Use AWS DataSync to transfer data to the new Amazon FSx file syste
- D. Point users to the new location
- E. Create a second Amazon FSx file system with a deployment type of Single-AZ 2. Use AWS DataSync to keep the data n syn
- F. Switch users to the second Amazon FSx fie system in the event of failure
- G. Use the AWS Management Console to take a backup of the Amazon FSx He system Create a new Amazon FSx file system with a deployment type of Multi-AZ Restore the backup to the new Amazon FSx file syste
- H. Point users to the new location.

**Answer: B**

#### NEW QUESTION 165

- (Exam Topic 2)

A solutions architect is working with a company that is extremely sensitive to its IT costs and wishes to implement controls that will result in a predictable AWS spend each month Which combination ot steps can help the company control and monitor its monthly AWS usage to achieve a cost that is as close as possible to the target amount? (Select THREE.)

- A. Implement an IAM policy that requires users to specify a 'workload' tag for cost allocation when launching Amazon EC2 instances
- B. Contact AWS Support and ask that they apply limits to the account so that users are not able to launch more than a certain number of instance types
- C. Purchase all upfront Reserved Instances that cover 100% of the account's expected Amazon EC2 usage
- D. Place conditions in the users' IAM policies that limit the number of instances they are able to launch
- E. Define 'workload' as a cost allocation tag in the AWS Billing and Cost Management console
- F. Set up AWS Budgets to alert and notify when a given workload is expected to exceed a defined cost

**Answer: AEF**

#### NEW QUESTION 170

- (Exam Topic 2)

A solutions architect must update an application environment within AWS Elastic Beanstalk using a With green deployment methodology. The solutions architect creates an environment that is identical to the existing application environment and deploys the application to the new environment.

What should be done next to complete the update?

- A. Redirect to the new environment using Amazon Route 53
- B. Select the Swap Environment URLs option.
- C. Replace the Auto Scaling launch configuration
- D. Update the DNS records to point to the green environment

**Answer: B**

#### NEW QUESTION 173

- (Exam Topic 2)

A company has a platform that contains an Amazon S3 bucket for user content. The S3 bucket has thousands of terabytes of objects, all in the S3 Standard storage class. The company has an RTO of 6 hours The company must replicate the data from its primary AWS Region to a replication S3 bucket in another Region

The user content S3 bucket contains user-uploaded files such as videos and photos. The user content S3 bucket has an unpredictable access pattern. The number of users is increasing quickly, and the company wants to create an S3 Lifecycle policy to reduce storage costs

Which combination of steps will meet these requirements MOST cost-effectively'? (Select TWO )

- A. Move the objects in the user content S3 bucket to S3 Intelligent-Tiering immediately
- B. Move the objects in the user content S3 bucket to S3 Intelligent-Tiering after 30 days
- C. Move the objects in the replication S3 bucket to S3 Standard-Infrequent Access (S3 Standard-IA) after 30 days and to S3 Glacier after 90 days
- D. Move the objects in the replication S3 bucket to S3 One Zone-Infrequent Access (S3 One Zone-IA) after 30 days and to S3 Glacier Deep Archive after 90 days
- E. Move the objects in the replication S3 bucket to S3 Standard-infrequent Access (S3 Standard-IA) after 30 days and to S3 Glacier Deep Archive after 180 days

**Answer:** AD

#### NEW QUESTION 177

- (Exam Topic 2)

A company has an organization in AWS Organizations. The organization consists of a large number of AWS accounts that belong to separate business units. The company requires all Amazon EC2 instances to be provisioned with custom, hardened AMIs. The company wants a solution that provides each AWS account access to the AMIs

Which solution will meet these requirements with the MOST operational efficiency?

- A. Create the AMIs with EC2 Image Builder Create an AWS CodePipeline pipeline to share the AMIs across all AWS accounts.
- B. Deploy Jenkins on an EC2 instance Create jobs to create and share the AMIs across all AWS accounts.
- C. Create and share the AMIs with EC2 Image Builder Use AWS Service Catalog to configure a product that provides access to the AMIs across all AWS accounts.
- D. Create the AMIs with EC2 Image Builder Create an AWS Lambda function to share the AMIs across all AWS accounts.

**Answer:** C

#### NEW QUESTION 180

- (Exam Topic 2)

A flood monitoring agency has deployed more than 10,000 water-level monitoring sensors. Sensors send continuous data updates, and each update is less than 1 MB in size. The agency has a fleet of on-premises application servers. These servers receive updates from the sensors, convert the raw data into a human readable format, and write the results to an on-premises relational database server. Data analysts then use simple SQL queries to monitor the data.

The agency wants to increase overall application availability and reduce the effort that is required to perform maintenance tasks. These maintenance tasks, which include updates and patches to the application servers, cause downtime. While an application server is down, data is lost from sensors because the remaining servers cannot handle the entire workload.

The agency wants a solution that optimizes operational overhead and costs. A solutions architect recommends the use of AWS IoT Core to collect the sensor data. What else should the solutions architect recommend to meet these requirements?

- A. Send the sensor data to Amazon Kinesis Data Firehose
- B. Use an AWS Lambda function to read the Kinesis Data Firehose data, convert it to .csv format, and insert it into an Amazon Aurora MySQL DB Instance
- C. Instruct the data analysts to query the data directly from the DB Instance.
- D. Send the sensor data to Amazon Kinesis Data Firehose
- E. Use an AWS Lambda function to read the Kinesis Data Firehose data, convert it to Apache Parquet format, and save it to an Amazon S3 bucket
- F. Instruct the data analysts to query the data by using Amazon Athena.
- G. Send the sensor data to an Amazon Kinesis Data Analytics application to convert the data to csv format and store it in an Amazon S3 bucket
- H. Import the data into an Amazon Aurora MySQL DB instance
- I. Instruct the data analysts to query the data directly from the DB instance
- J. Send the sensor data to an Amazon Kinesis Data Analytics application to convert the data to Apache Parquet format and store it in an Amazon S3 bucket
- K. Instruct the data analysts to query the data by using Amazon Athena.

**Answer:** B

#### NEW QUESTION 184

- (Exam Topic 2)

A financial services company in North America plans to release a new online web application to its customers on AWS. The company will launch the application in the us-east-1 Region on Amazon EC2 instances. The application must be highly available and must dynamically scale to meet user traffic. The company also wants to implement a disaster recovery environment for the application in the us-west-1 Region by using active-passive failover.

Which solution will meet these requirements?

- A. Create a VPC in us-east-1 and a VPC in us-west-1. Configure VPC peering in the us-east-1 VPC
- B. Create an Application Load Balancer (ALB) that extends across multiple Availability Zones in both VPCs. Create an Auto Scaling group that deploys the EC2 instances across the multiple Availability Zones in both VPCs. Place the Auto Scaling group behind the ALB.
- C. Create a VPC in us-east-1 and a VPC in us-west-1. In the us-east-1 VPC
- D. Create an Application Load Balancer (ALB) that extends across multiple Availability Zones in that VPC
- E. Create an Auto Scaling group that deploys the EC2 instances across the multiple Availability Zones in the us-east-1 VPC. Place the Auto Scaling group behind the ALB. Set up the same configuration in the us-west-1 VPC
- F. Create an Amazon Route 53 hosted zone. Create separate records for each ALB. Enable health checks to ensure high availability between Regions.
- G. Create a VPC in us-east-1 and a VPC in us-west-1. In the us-east-1 VPC
- H. Create an Application Load Balancer (ALB) that extends across multiple Availability Zones in that VPC. Create an Auto Scaling group that deploys the EC2 instances across the multiple Availability Zones in the us-east-1 VPC. Place the Auto Scaling group behind the ALB. Set up the same configuration in the us-west-1 VPC. Create an Amazon Route 53 hosted zone
- I. Create separate records for each ALB. Enable health checks and configure a failover routing policy for each record.
- J. Create a VPC in us-east-1 and a VPC in us-west-1. Configure VPC peering in the us-east-1 VPC
- K. Create an Application Load Balancer (ALB) that extends across multiple Availability Zones. Create an Auto Scaling group that deploys the EC2 instances across the multiple Availability Zones in both VPCs. Place the Auto Scaling group behind the ALB. Create an Amazon Route 53 host. Create a record for the ALB.

**Answer:** C

#### NEW QUESTION 186

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