AWS-Certified-Security-Specialty Dumps

Amazon AWS Certified Security - Specialty

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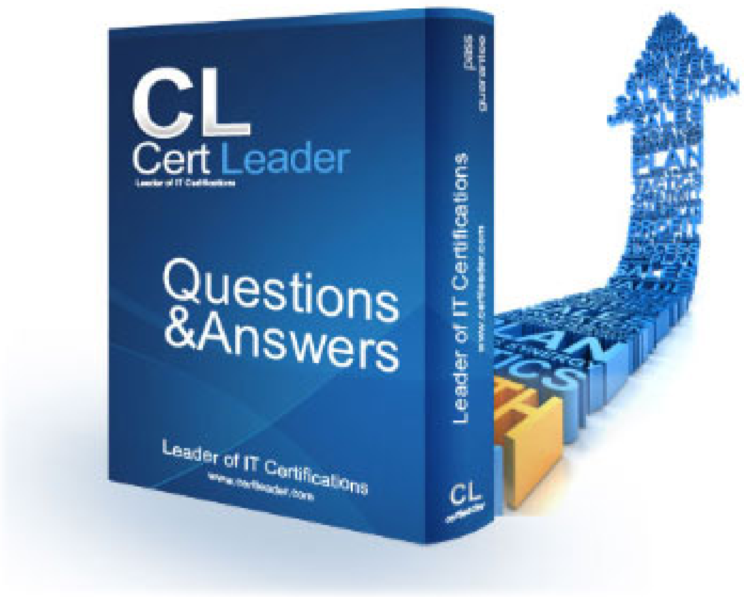


NEW QUESTION 1
An IT department currently has a Java web application deployed on Apache Tomcat running on Amazon EC2 instances. All traffic to the EC2 instances is sent through an internet-facing Application Load Balancer (ALB)
The Security team has noticed during the past two days thousands of unusual read requests coming from hundreds of IP addresses. This is causing the Tomcat server to run out of threads and reject new connections
Which the SIMPLEST change that would address this server issue?

A. Create an Amazon CloudFront distribution and configure the ALB as the origin
B. Block the malicious IPs with a network access list (NACL).
C. Create an IAM Web Application Firewall (WAF). and attach it to the ALB
D. Map the application domain name to use Route 53

Answer: A

Explanation:
this is the simplest change that can address the server issue. CloudFront is a service that provides a global network of edge locations that cache and deliver web content. Creating a CloudFront distribution and configuring the ALB as the origin can help reduce the load on the Tomcat server by serving cached content to the end users. CloudFront can also provide protection against distributed denial-of-service (DDoS) attacks by filtering malicious traffic at the edge locations. The other options are either ineffective or complex for solving the server issue.

NEW QUESTION 2
A company deployed IAM Organizations to help manage its increasing number of IAM accounts. A security engineer wants to ensure only principals in the Organization structure can access a specic Amazon S3 bucket. The solution must also minimize operational overhead
Which solution will meet these requirements?

A. 1 Put all users into an IAM group with an access policy granting access to the J bucket.
B. Have the account creation trigger an IAM Lambda function that manages the bucket policy, allowing access to accounts listed in the policy only.
C. Add an SCP to the Organizations master account, allowing all principals access to the bucket.
D. Specify the organization ID in the global key condition element of a bucket policy, allowing all principals access.

Answer: D

NEW QUESTION 3
A company wants to protect its website from man in-the-middle attacks by using Amazon CloudFront. Which solution will meet these requirements with the LEAST operational overhead?

A. Use the SimpleCORS managed response headers policy.
B. Use a Lambda@Edge function to add the Strict-Transport-Security response header.
C. Use the SecurityHeadersPolicy managed response headers policy.
D. Include the X-XSS-Protection header in a custom response headers policy.

Answer: C

Explanation:
https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/using-managed-response-headers-poli The SecurityHeadersPolicy is a managed policy provided by Amazon CloudFront that includes a set of recommended security headers to enhance the security of your website. These headers help protect against various types of attacks, including man-in-the-middle attacks. By applying the SecurityHeadersPolicy to your CloudFront distribution, the necessary security headers will be automatically added to the responses sent by CloudFront. This reduces operational overhead because you don't have to manually configure or manage the headers yourself.

NEW QUESTION 4
A company needs to improve its ability to identify and prevent IAM policies that grant public access or cross-account access to resources. The company has implemented AWS Organizations and has started using AWS Identity and Access Management Access Analyzer to refine overly broad access to accounts in the organization.
A security engineer must automate a response in the company's organization for any newly created policies that are overly permissive. The automation must remediate external access and must notify the company's security team.
Which combination of steps should the security engineer take to meet these requirements? (Select THREE.)

A. Create an AWS Step Functions state machine that checks the resource type in the finding and adds an explicit Deny statement in the trust policy for the IAM rol
B. Configure the state machine to publish a notification to an Amazon SimpleNotification Service (Amazon SNS) topic.
C. Create an AWS Batch job that forwards any resource type findings to an AWS Lambda function.Configure the Lambda function to add an explicit Deny statement in the trust policy for the IAM rol
D. Configure the AWS Batch job to publish a notification to an Amazon Simple Notification Service (Amazon SNS) topic.
E. In Amazon EventBridge, create an event rule that matches active IAM Access Analyzer findings and invokes AWS Step Functions for resolution.
F. In Amazon CloudWatch, create a metric filter that matches active IAM Access Analyzer findings and invokes AWS Batch for resolution.
G. Create an Amazon Simple Queue Service (Amazon SQS) queu
H. Configure the queue to forward a notification to the security team that an external principal has been granted access to the specific IAM role and has been blocked.
I. Create an Amazon Simple Notification Service (Amazon SNS) topic for external or cross-account access notice
J. Subscribe the security team's email addresses to the topic.

Answer: ACF

Explanation:
The correct answer is A, C, and F.
To automate a response for any newly created policies that are overly permissive, the security engineer needs to use a combination of services that can monitor, analyze, remediate, and notify the security incidents.
Option A is correct because creating an AWS Step Functions state machine that checks the resource type in the finding and adds an explicit Deny statement in the

trust policy for the IAM role is a valid way to remediate external access. AWS Step Functions is a service that allows you to coordinate multiple AWS services into serverless workflows. You can use Step Functions to invoke AWS Lambda functions, which can modify the IAM policies programmatically. You can also use Step Functions to publish a notification to an Amazon SNS topic, which can send messages to subscribers such as email addresses.
Option B is incorrect because creating an AWS Batch job that forwards any resource type findings to an AWS Lambda function is not a suitable way to automate a response. AWS Batch is a service that enables you to run batch computing workloads on AWS. Batch is designed for large-scale and long-running jobs that can benefit from parallelization and dynamic provisioning of compute resources. Batch is not intended for event-driven and real-time workflows that require immediate response.
Option C is correct because creating an Amazon EventBridge event rule that matches active IAM Access Analyzer findings and invokes AWS Step Functions for resolution is a valid way to monitor and analyze the security incidents. Amazon EventBridge is a serverless event bus service that allows you to connect your applications with data from various sources. EventBridge can use rules to match events and route them to targets for processing. You can use EventBridge to invoke AWS Step Functions state machines from the IAM Access Analyzer findings.
Option D is incorrect because creating an Amazon CloudWatch metric filter that matches active IAM Access Analyzer findings and invokes AWS Batch for resolution is not a suitable way to monitor and analyze the security incidents. Amazon CloudWatch is a service that provides monitoring and observability for your AWS resources and applications. CloudWatch can collect metrics, logs, and events from various sources and perform actions based on alarms or filters. However, CloudWatch cannot directly invoke AWS Batch jobs from the IAM Access Analyzer findings. You would need to use another service such as EventBridge or SNS to trigger the Batch job.
Option E is incorrect because creating an Amazon SQS queue that forwards a notification to the security team that an external principal has been granted access to the specific IAM role and has been blocked is not a valid way to notify the security incidents. Amazon SQS is a fully managed message queue service that enables you to decouple and scale microservices, distributed systems, and serverless applications. SQS can deliver messages to consumers that poll the queue for messages. However, SQS cannot directly forward a notification to the security team's email addresses. You would need to use another service such as SNS or SES to send email notifications.
Option F is correct because creating an Amazon SNS topic for external or cross-account access notices and subscribing the security team's email addresses to the topic is a valid way to notify the security incidents. Amazon SNS is a fully managed messaging service that enables you to decouple and scale microservices, distributed systems, and serverless applications. SNS can deliver messages to a variety of endpoints, such as email, SMS, or HTTP. You can use SNS to send email notifications to the security team when a critical security finding is detected.
References:

- AWS Step Functions
- AWS Batch
- Amazon EventBridge
- Amazon CloudWatch
- Amazon SQS
- Amazon SNS

NEW QUESTION 5
A company has an encrypted Amazon Aurora DB cluster in the us-east-1 Region. The DB cluster is encrypted with an AWS Key Management Service (AWS KMS) customer managed key. To meet compliance requirements, the company needs to copy a DB snapshot to the us-west-1 Region. However, when the company tries to copy the snapshot to us-west-1 the company cannot access the key that was used to encrypt the original database.
What should the company do to set up the snapshot in us-west-1 with proper encryption?

A. Use AWS Secrets Manager to store the customer managed key in us-west-1 as a secret Use this secret to encrypt the snapshot in us-west-1.
B. Create a new customer managed key in us-west-1. Use this new key to encrypt the snapshot in us-west-1.
C. Create an IAM policy that allows access to the customer managed key in us-east-1. Specify am aws kmsus-west-1 " as the principal.
D. Create an IAM policy that allows access to the customer managed key in us-east-1. Specify arn aws rds us-west-1. * as the principal.

Answer: B

Explanation:
"If you copy an encrypted snapshot across Regions, you must specify a KMS key valid in the destination AWS Region. It can be a Region-specific KMS key, or a multi-Region key." https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/aurora-copy-snapshot.html#aurora-copy-sna

NEW QUESTION 6
A company has a large fleet of Linux Amazon EC2 instances and Windows EC2 instances that run in private subnets. The company wants all remote administration to be performed as securely as possible in the AWS Cloud.
Which solution will meet these requirements?

A. Do not use SSH-RSA private keys during the launch of new instance
B. Implement AWS Systems Manager Session Manager.
C. Generate new SSH-RSA private keys for existing instance
D. Implement AWS Systems Manager Session Manager.
E. Do not use SSH-RSA private keys during the launch of new instance
F. Configure EC2 Instance Connect.
G. Generate new SSH-RSA private keys for existing instance
H. Configure EC2 Instance Connect.

Answer: A

Explanation:
AWS Systems Manager Session Manager is a fully managed service that allows you to securely and remotely administer your EC2 instances without the need to open inbound ports, maintain bastion hosts, or manage SSH keys. Session Manager provides an interactive browser-based shell or CLI access to your instances, as well as port forwarding and auditing capabilities. Session Manager works with both Linux and Windows instances, and supports hybrid environments and edge devices.
EC2 Instance Connect is a feature that allows you to use SSH to connect to your Linux instances using
short-lived keys that are generated on demand and delivered securely through the AWS metadata service. EC2 Instance Connect does not require any additional software installation or configuration on the instance, but it does require you to use SSH-RSA keys during the launch of new instances.
The correct answer is to use Session Manager, as it provides more security and flexibility than EC2 Instance Connect, and does not require SSH-RSA keys or inbound ports. Session Manager also works with Windows instances, while EC2 Instance Connect does not.
Verified References:

- https://docs.aws.amazon.com/systems-manager/latest/userguide/session-manager.html

- https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/Connect-using-EC2-Instance-Connect.html
- https://repost.aws/questions/QUnV4R9EoeSdW0GT3cKBUR7w/what-is-the-difference-between-ec-2-ins

NEW QUESTION 7
A company wants to monitor the deletion of customer managed CMKs A security engineer must create an alarm that will notify the company before a CMK is deleted The security engineer has configured the integration of IAM CloudTrail with Amazon CloudWatch
What should the security engineer do next to meet this requirement?

A. Use inbound rule 100 to allow traffic on TCP port 443 Use inbound rule 200 to deny traffic on TCP port 3306 Use outbound rule 100 to allow traffic on TCP port 443
B. Use inbound rule 100 to deny traffic on TCP port 3306. Use inbound rule 200 to allow traffic on TCP port range 1024-65535. Use outbound rule 100 to allow traffic on TCP port 443
C. Use inbound rule 100 to allow traffic on TCP port range 1024-65535 Use inbound rule 200 to deny traffic on TCP port 3306 Use outbound rule 100 to allow traffic on TCP port 443
D. Use inbound rule 100 to deny traffic on TCP port 3306 Use inbound rule 200 to allow traffic on TCP port 443 Use outbound rule 100 to allow traffic on TCP port 443

Answer: A

NEW QUESTION 8
A company is hosting a static website on Amazon S3 The company has configured an Amazon CloudFront distribution to serve the website contents The company has associated an IAM WAF web ACL with the CloudFront distribution. The web ACL ensures that requests originate from the United States to address compliance restrictions.
THE company is worried that the S3 URL might still be accessible directly and that requests can bypass the CloudFront distribution
Which combination of steps should the company take to remove direct access to the S3 URL? (Select TWO.)

A. Select "Restrict Bucket Access" in the origin settings of the CloudFront distribution
B. Create an origin access identity (OAI) for the S3 origin
C. Update the S3 bucket policy to allow s3 GetObject with a condition that the IAM Referer key matches the secret value Deny all other requests
D. Configure the S3 bucket poky so that only the origin access identity (OAI) has read permission for objects in the bucket
E. Add an origin custom header that has the name Referer to the CloudFront distribution Give the header asecret value.

Answer: AD

NEW QUESTION 9
A recent security audit found that IAM CloudTrail logs are insufficiently protected from tampering and unauthorized access Which actions must the Security Engineer take to address these audit findings? (Select THREE)

A. Ensure CloudTrail log file validation is turned on
B. Configure an S3 lifecycle rule to periodically archive CloudTrail logs into Glacier for long-term storage
C. Use an S3 bucket with tight access controls that exists m a separate account
D. Use Amazon Inspector to monitor the file integrity of CloudTrail log files.
E. Request a certificate through ACM and use a generated certificate private key to encrypt CloudTrail log files
F. Encrypt the CloudTrail log files with server-side encryption with IAM KMS-managed keys (SSE-KMS)

Answer: ADE

NEW QUESTION 10
A company's engineering team is developing a new application that creates IAM Key Management Service (IAM KMS) CMK grants for users immediately after a grant IS created users must be able to use the CMK tu encrypt a 512-byte payload. During load testing, a bug appears |intermittently where AccessDeniedExceptions are occasionally triggered when a user rst attempts to encrypt using the CMK
Which solution should the c0mpany‘s security specialist recommend‘?

A. Instruct users to implement a retry mechanism every 2 minutes until the call succeeds.
B. Instruct the engineering team to consume a random grant token from users, and to call the CreateGrant operation, passing it the grant toke
C. Instruct use to use that grant token in their call to encrypt.
D. Instruct the engineering team to create a random name for the grant when calling the CreateGrant operatio
E. Return the name to the users and instruct them to provide the name as the grant token in the call to encrypt.
F. Instruct the engineering team to pass the grant token returned in the CreateGrant response to users.Instruct users to use that grant token in their call to encrypt.

Answer: D

Explanation:
To avoid AccessDeniedExceptions when users first attempt to encrypt using the CMK, the security specialist should recommend the following solution:
- Instruct the engineering team to pass the grant token returned in the CreateGrant response to users. This allows the engineering team to use the grant token as a form of temporary authorization for the grant.
- Instruct users to use that grant token in their call to encrypt. This allows the users to use the grant token as a proof that they have permission to use the CMK, and to avoid any eventual consistency issues with the grant creation.

NEW QUESTION 10
An Application team has requested a new IAM KMS master key for use with Amazon S3, but the organizational security policy requires separate master keys for different IAM services to limit blast radius.
How can an IAM KMS customer master key (CMK) be constrained to work with only Amazon S3?

A. Configure the CMK key policy to allow only the Amazon S3 service to use the kms Encrypt action
B. Configure the CMK key policy to allow IAM KMS actions only when the kms ViaService condition matches the Amazon S3 service name.

C. Configure the IAM user's policy lo allow KMS to pass a rote lo Amazon S3
D. Configure the IAM user's policy to allow only Amazon S3 operations when they are combined with the CMK

Answer: B

Explanation:
the kms:ViaService condition key can be used to restrict a CMK to work with only a specific AWS
service6. By configuring the CMK key policy to allow KMS actions only when the kms:ViaService condition matches the Amazon S3 service name, you can ensure that only Amazon S3 can use the CMK7. The other options are either incorrect or insufficient for constraining a CMK to work with only Amazon S3.

NEW QUESTION 13
A company has a batch-processing system that uses Amazon S3, Amazon EC2, and AWS Key Management Service (AWS KMS). The system uses two AWS accounts: Account A and Account B.
Account A hosts an S3 bucket that stores the objects that will be processed. The S3 bucket also stores the results of the processing. All the S3 bucket objects are encrypted by a KMS key that is managed in
Account A.
Account B hosts a VPC that has a fleet of EC2 instances that access the S3 buck-et in Account A by using statements in the bucket policy. The VPC was created with DNS hostnames enabled and DNS resolution enabled.
A security engineer needs to update the design of the system without changing any of the system's code. No AWS API calls from the batch-processing EC2 instances can travel over the internet.
Which combination of steps will meet these requirements? (Select TWO.)

A. In the Account B VPC, create a gateway VPC endpoint for Amazon S3. For the gateway VPC endpoint,create a resource policy that allows the s3:GetObject, s3:ListBucket, s3:PutObject, and s3:PutObjectAcl actions for the S3 bucket.
B. In the Account B VPC, create an interface VPC endpoint for Amazon S3. For the interface VPC endpoint, create a resource policy that allows the s3:GetObject, s3:ListBucket, s3:PutObject, and s3:PutObjectAcl actions for the S3 bucket.
C. In the Account B VPC, create an interface VPC endpoint for AWS KM
D. For the interface VPC endpoint, create a resource policy that allows the kms:Encrypt, kms:Decrypt, and kms:GenerateDataKey actions for the KMS ke
E. Ensure that private DNS is turned on for the endpoint.
F. In the Account B VPC, create an interface VPC endpoint for AWS KM
G. For the interface VPC endpoint, create a resource policy that allows the kms:Encrypt, kms:Decrypt, and kms:GenerateDataKey actions for the KMS ke
H. Ensure that private DNS is turned off for the endpoint.
I. In the Account B VPC, verify that the S3 bucket policy allows the s3:PutObjectAcl action for cross-account us
J. In the Account B VPC, create a gateway VPC endpoint for Amazon S3. For the gateway VPC endpoint, create a resource policy that allows the s3:GetObject, s3:ListBucket, and s3:PutObject actions for the S3 bucket.

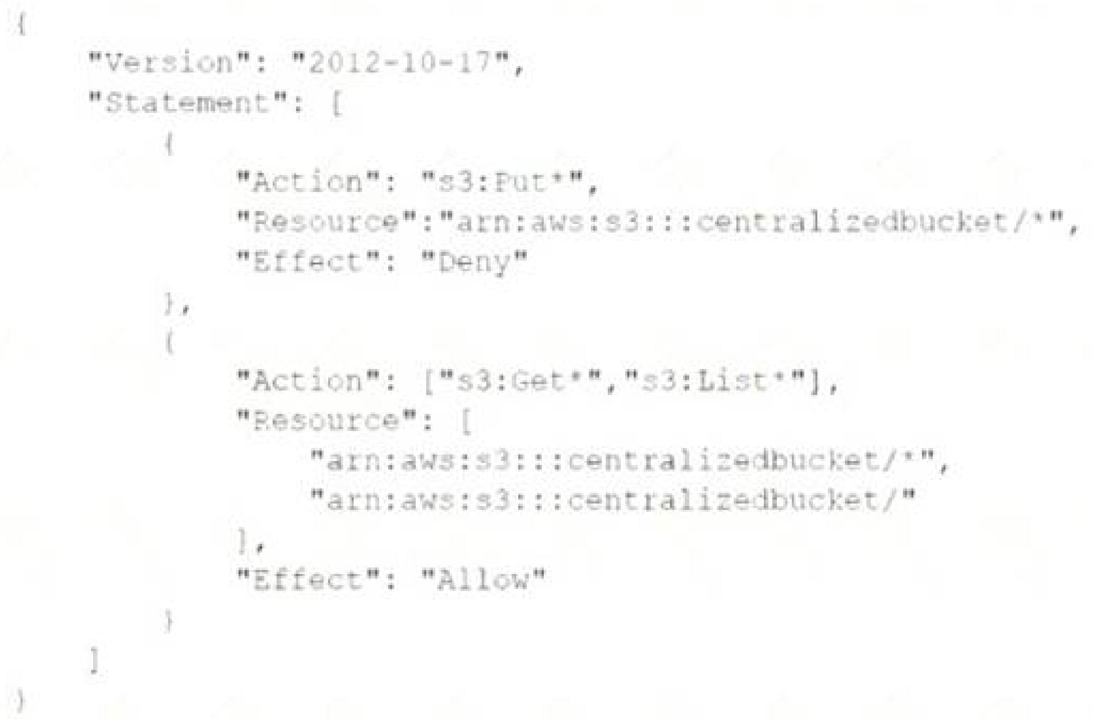
Answer: BC

NEW QUESTION 14
A company has an AWS Lambda function that creates image thumbnails from larger images. The Lambda function needs read and write access to an Amazon S3 bucket in the same AWS account.
Which solutions will provide the Lambda function this access? (Select TWO.)

A. Create an IAM user that has only programmatic acces
B. Create a new access key pai
C. Add environmental variables to the Lambda function with the ac-cess key ID and secret access ke
D. Modify the Lambda function to use the environmental variables at run time during communication with Amazon S3.
E. Generate an Amazon EC2 key pai
F. Store the private key in AWS Secrets Man-age
G. Modify the Lambda function to retrieve the private key from Secrets Manager and to use the private key during communication with Amazon S3.
H. Create an IAM role for the Lambda functio
I. Attach an IAM policy that al-lows access to the S3 bucket.
J. Create an IAM role for the Lambda functio
K. Attach a bucket policy to the S3 bucket to allow access.Specify the function's IAM role as the princi-pal.
L. Create a security grou
M. Attach the security group to the Lambda functio
N. Attach a bucket policy that allows access to the S3 bucket through the se-curity group ID.

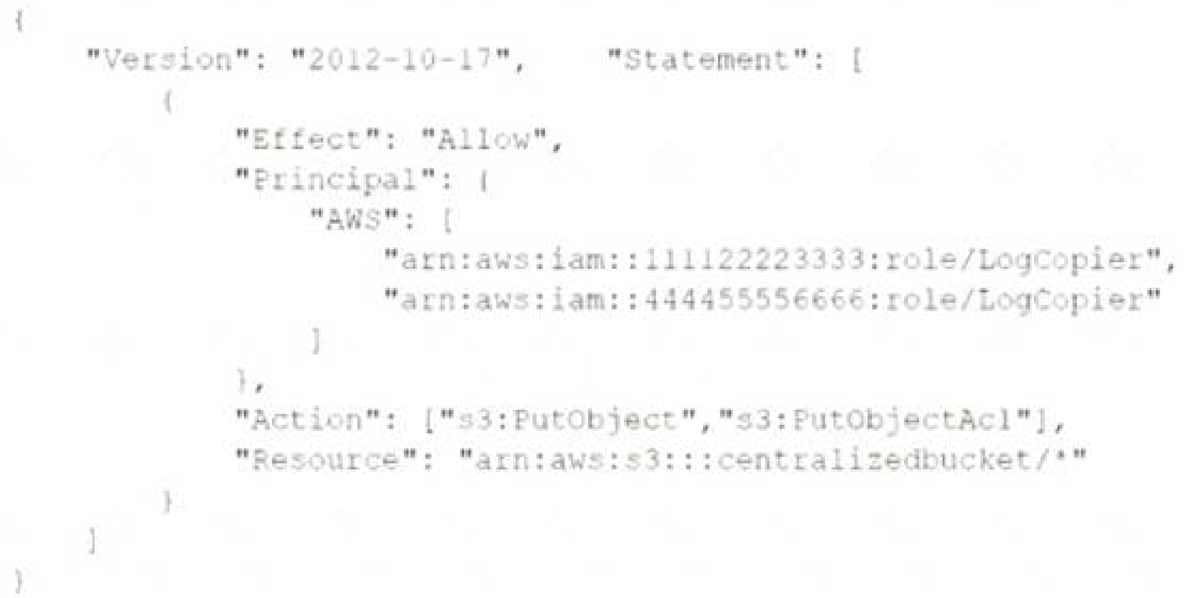
Answer: CD

NEW QUESTION 18
A company's Security Engineer is copying all application logs to centralized Amazon S3 buckets. Currently, each of the company's applications is in its own IAM account, and logs are pushed into S3 buckets associated with each account. The Engineer will deploy an IAM Lambda function into each account that copies the relevant log files to the centralized S3 bucket.
The Security Engineer is unable to access the log files in the centralized S3 bucket. The Engineer's IAM user policy from the centralized account looks like this:



```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Action": "s3:Put*",
            "Resource":"arn:aws:s3:::centralizedbucket/*",
            "Effect": "Deny"
        },
        {
            "Action": ["s3:Get*","s3:List*"],
            "Resource": [
                "arn:aws:s3:::centralizedbucket/*",
                "arn:aws:s3:::centralizedbucket/"
            ],
            "Effect": "Allow"
        }
    ]
}
```

The centralized S3 bucket policy looks like this:



```
{
    "Version": "2012-10-17",     "Statement": [
        {
            "Effect": "Allow",
            "Principal": {
                "AWS": [
                    "arn:aws:iam::111122223333:role/LogCopier",
                    "arn:aws:iam::444455556666:role/LogCopier"
                ]
            },
            "Action": ["s3:PutObject","s3:PutObjectAcl"],
            "Resource": "arn:aws:s3:::centralizedbucket/*"
        }
    ]
}
```

Why is the Security Engineer unable to access the log files?

A. The S3 bucket policy does not explicitly allow the Security Engineer access to the objects in the bucket.
B. The object ACLs are not being updated to allow the users within the centralized account to access the objects
C. The Security Engineers IAM policy does not grant permissions to read objects in the S3 bucket
D. The s3:PutObject and s3:PutObjectAcl permissions should be applied at the S3 bucket level

Answer: C

NEW QUESTION 23
A company finds that one of its Amazon EC2 instances suddenly has a high CPU usage. The company does not know whether the EC2 instance is compromised or whether the operating system is performing background cleanup.
Which combination of steps should a security engineer take before investigating the issue? (Select THREE.)

A. Disable termination protection for the EC2 instance if termination protection has not been disabled.
B. Enable termination protection for the EC2 instance if termination protection has not been enabled.
C. Take snapshots of the Amazon Elastic Block Store (Amazon EBS) data volumes that are attached to the EC2 instance.
D. Remove all snapshots of the Amazon Elastic Block Store (Amazon EBS) data volumes that are attached to the EC2 instance.
E. Capture the EC2 instance metadata, and then tag the EC2 instance as under quarantine.
F. Immediately remove any entries in the EC2 instance metadata that contain sensitive information.

Answer: BCE

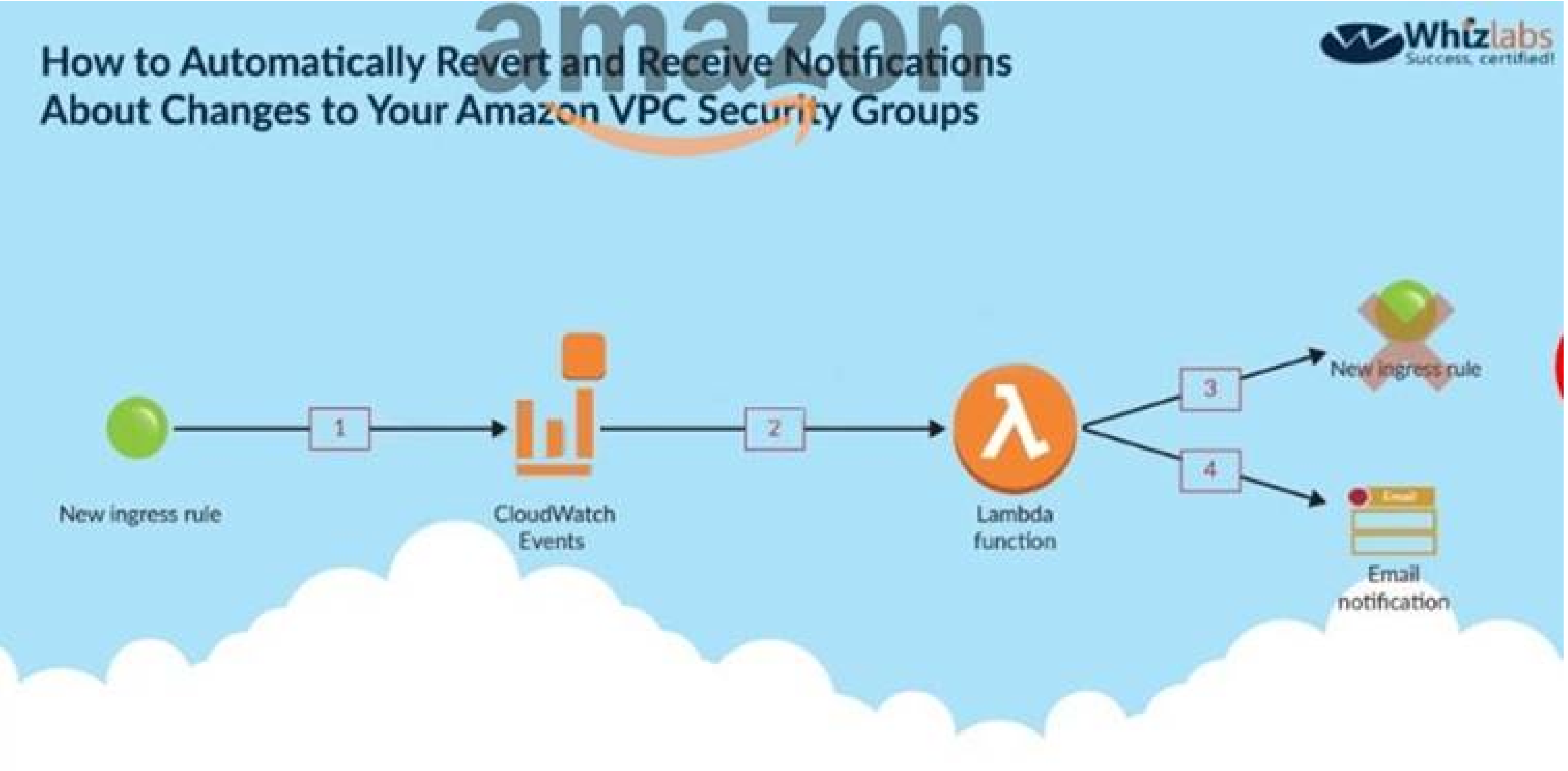
Explanation:
https://d1.awsstatic.com/WWPS/pdf/aws_security_incident_response.pdf

NEW QUESTION 28
Your company has a set of EC2 Instances defined in IAM. These Ec2 Instances have strict security groups attached to them. You need to ensure that changes to the Security groups are noted and acted on accordingly. How can you achieve this?
Please select:

A. Use Cloudwatch logs to monitor the activity on the Security Group
B. Use filters to search for the changes and use SNS for the notification.
C. Use Cloudwatch metrics to monitor the activity on the Security Group
D. Use filters to search for the changes and use SNS for the notification.
E. Use IAM inspector to monitor the activity on the Security Group
F. Use filters to search for the changes and use SNS f the notification.
G. Use Cloudwatch events to be triggered for any changes to the Security Group
H. Configure the Lambda function for email notification as well.

Answer: D

Explanation:
The below diagram from an IAM blog shows how security groups can be monitored
C:\Users\wk\Desktop\mudassar\Untitled.jpg



Option A is invalid because you need to use Cloudwatch Events to check for chan, Option B is invalid because you need to use Cloudwatch Events to check for chang
Option C is invalid because IAM inspector is not used to monitor the activity on Security Groups For more information on monitoring security groups, please visit the below URL:
Ihttpsy/IAM.amazon.com/blogs/security/how-to-automatically-revert-and-receive-notifications-about-changes-t 'pc-security-groups/
The correct answer is: Use Cloudwatch events to be triggered for any changes to the Security Groups. Configure the Lambda function for email notification as well. Submit your Feedback/Queries to our Experts

NEW QUESTION 33
A company stores images for a website in an Amazon S3 bucket. The company is using Amazon CloudFront to serve the images to end users. The company recently discovered that the images are being accessed from countries where the company does not have a distribution license.
Which actions should the company take to secure the images to limit their distribution? (Select TWO.)

A. Update the S3 bucket policy to restrict access to a CloudFront origin access identity (OAI).
B. Update the website DNS record to use an Amazon Route 53 geolocation record deny list of countries where the company lacks a license.
C. Add a CloudFront geo restriction deny list of countries where the company lacks a license.
D. Update the S3 bucket policy with a deny list of countries where the company lacks a license.
E. Enable the Restrict Viewer Access option in CloudFront to create a deny list of countries where the company lacks a license.

Answer: AC

Explanation:
To secure the images to limit their distribution, the company should take the following actions:

- Update the S3 bucket policy to restrict access to a CloudFront origin access identity (OAI). This allows the company to use a special CloudFront user that can access objects in their S3 bucket, and prevent anyone else from accessing them directly.
- Add a CloudFront geo restriction deny list of countries where the company lacks a license. This allows the company to use a feature that controls access to their content based on the geographic location of their viewers, and block requests from countries where they do not have a distribution license.

NEW QUESTION 36
A company is using Amazon Elastic Container Service (Amazon ECS) to run its container-based application on AWS. The company needs to ensure that the container images contain no severe vulnerabilities. The company also must ensure that only specific IAM roles and specific AWS accounts can access the container images.
Which solution will meet these requirements with the LEAST management overhead?

A. Pull images from the public container registr
B. Publish the images to Amazon Elastic Container Registry (Amazon ECR) repositories with scan on push configured in a centralized AWS accoun
C. Use a CI/CD pipeline to deploy the images to different AWS account
D. Use identity-based policies to restrict access to which IAM principals can access the images.
E. Pull images from the public container registr
F. Publish the images to a private container registry that is hosted on Amazon EC2 instances in a centralized AWS accoun
G. Deploy host-based container scanning tools to EC2 instances that run Amazon EC
H. Restrict access to the container images by using basic authentication over HTTPS.
I. Pull images from the public container registr
J. Publish the images to Amazon Elastic Container Registry (Amazon ECR) repositories with scan on push configured in a centralized AWS accoun
K. Use a CI/CD pipeline to deploy the images to different AWS account
L. Use repository policies and identity-based policies to restrict access to which IAM principals and accounts can access the images.
M. Pull images from the public container registr
N. Publish the images to AWS CodeArtifact repositories in a centralized AWS accoun
O. Use a CI/CD pipeline to deploy the images to different AWS account
P. Use repository policies and identity-based policies to restrict access to which IAM principals and accounts can access the images.

Answer: C

Explanation:
The correct answer is C. Pull images from the public container registry. Publish the images to Amazon Elastic Container Registry (Amazon ECR) repositories with scan on push configured in a centralized AWS account.
Use a CI/CD pipeline to deploy the images to different AWS accounts. Use repository policies and identity-based policies to restrict access to which IAM principals and accounts can access the images.
This solution meets the requirements because:

- Amazon ECR is a fully managed container registry service that supports Docker and OCI images and artifacts1. It integrates with Amazon ECS and other AWS services to simplify the development and deployment of container-based applications.
- Amazon ECR provides image scanning on push, which uses the Common Vulnerabilities and Exposures (CVEs) database from the open-source Clair project to detect software vulnerabilities in container images2. The scan results are available in the AWS Management Console, AWS CLI, or AWS SDKs2.
- Amazon ECR supports cross-account access to repositories, which allows sharing images across multiple AWS accounts3. This can be achieved by using repository policies, which are resource-based policies that specify which IAM principals and accounts can access the repositories and what actions they can perform4. Additionally, identity-based policies can be used to control which IAM roles in each account can access the repositories5.

The other options are incorrect because:

- A. This option does not use repository policies to restrict cross-account access to the images, which is a requirement. Identity-based policies alone are not sufficient to control access to Amazon ECR repositories5.
- B. This option does not use Amazon ECR, which is a fully managed service that provides image scanning and cross-account access features. Hosting a private container registry on EC2 instances would require more management overhead and additional security measures.
- D. This option uses AWS CodeArtifact, which is a fully managed artifact repository service that supports Maven, npm, NuGet, PyPI, and generic package formats6. However, AWS CodeArtifact does not support Docker or OCI container images, which are required for Amazon ECS applications.

NEW QUESTION 37
A company has deployed servers on Amazon EC2 instances in a VPC. External vendors access these servers over the internet. Recently, the company deployed a new application on EC2 instances in a new CIDR range. The company needs to make the application available to the vendors.
A security engineer verified that the associated security groups and network ACLs are allowing the required ports in the inbound diction. However, the vendors cannot connect to the application.
Which solution will provide the vendors access to the application?

A. Modify the security group that is associated with the EC2 instances to have the same outbound rules asinbound rules.
B. Modify the network ACL that is associated with the CIDR range to allow outbound traffic to ephemeral ports.
C. Modify the inbound rules on the internet gateway to allow the required ports.
D. Modify the network ACL that is associated with the CIDR range to have the same outbound rules as inbound rules.

Answer: B

Explanation:
The correct answer is B. Modify the network ACL that is associated with the CIDR range to allow outbound traffic to ephemeral ports.
This answer is correct because network ACLs are stateless, which means that they do not automatically allow return traffic for inbound connections. Therefore, the network ACL that is associated with the CIDR range of the new application must have outbound rules that allow traffic to ephemeral ports, which are the temporary ports used by the vendors' machines to communicate with the application servers. Ephemeral ports are typically in the range of 1024-655351. If the network ACL does not have such rules, the vendors will not be able to connect to the application.
The other options are incorrect because:

- A. Modifying the security group that is associated with the EC2 instances to have the same outbound rules as inbound rules is not a solution, because security groups are stateful, which means that they automatically allow return traffic for inbound connections. Therefore, there is no need to add outbound rules to the security group for the vendors to access the application2.
- C. Modifying the inbound rules on the internet gateway to allow the required ports is not a solution, because internet gateways do not have inbound or outbound rules. Internet gateways are VPC components that enable communication between instances in a VPC and the internet. They do not filter traffic based on ports or protocols3.
- D. Modifying the network ACL that is associated with the CIDR range to have the same outbound rules as inbound rules is not a solution, because it does not address the issue of ephemeral ports. The outbound rules of the network ACL must match the ephemeral port range of the vendors' machines, not necessarily the inbound rules of the network ACL4.

References:
1: Ephemeral port - Wikipedia 2: Security groups for your VPC - Amazon Virtual Private Cloud 3: Internet gateways - Amazon Virtual Private Cloud 4: Network ACLs - Amazon Virtual Private Cloud

NEW QUESTION 40
Amazon GuardDuty has detected communications to a known command and control endpoint from a company's Amazon EC2 instance. The instance was found to be running a vulnerable version of a common web framework. The company's security operations team wants to quickly identity other compute resources with the specific version of that framework installed.
Which approach should the team take to accomplish this task?

A. Scan all the EC2 instances for noncompliance with IAM Confi
B. Use Amazon Athena to query IAM CloudTrail logs for the framework installation
C. Scan all the EC2 instances with the Amazon Inspector Network Reachability rules package to identity instances running a web server with RecognizedPortWithListener findings
D. Scan all the EC2 instances with IAM Systems Manager to identify the vulnerable version of the web framework
E. Scan an the EC2 instances with IAM Resource Access Manager to identify the vulnerable version of the web framework

Answer: C

Explanation:
To quickly identify other compute resources with the specific version of the web framework installed, the team should do the following:

- Scan all the EC2 instances with AWS Systems Manager to identify the vulnerable version of the web framework. This allows the team to use AWS Systems Manager Inventory to collect and query
information about the software installed on their EC2 instances, and to filter the results by software name and version.

NEW QUESTION 42
A company has an application that uses dozens of Amazon DynamoDB tables to store data. Auditors find that the tables do not comply with the company's data protection policy.
The company's retention policy states that all data must be backed up twice each month: once at midnight on the 15th day of the month and again at midnight on the 25th day of the month. The company must retain the backups for 3 months.
Which combination of steps should a security engineer take to meet these re-quirements? (Select TWO.)

A. Use the DynamoDB on-demand backup capability to create a backup pla
B. Con-figure a lifecycle policy to expire backups after 3 months.
C. Use AWS DataSync to create a backup pla
D. Add a backup rule that includes a retention period of 3 months.
E. Use AVVS Backup to create a backup pla
F. Add a backup rule that includes a retention period of 3 months.
G. Set the backup frequency by using a cron schedule expressio
H. Assign each DynamoDB table to the backup plan.
I. Set the backup frequency by using a rate schedule expressio
J. Assign each DynamoDB table to the backup plan.

Answer: AD

NEW QUESTION 47
A company uses infrastructure as code (IaC) to create AWS infrastructure. The company writes the code as AWS CloudFormation templates to deploy the infrastructure. The company has an existing CI/CD pipeline that the company can use to deploy these templates.
After a recent security audit, the company decides to adopt a policy-as-code approach to improve the company's security posture on AWS. The company must prevent the deployment of any infrastructure that would violate a security policy, such as an unencrypted Amazon Elastic Block Store (Amazon EBS) volume.
Which solution will meet these requirements?

A. Turn on AWS Trusted Adviso
B. Configure security notifications as webhooks in the preferences section of the CI/CD pipeline.
C. Turn on AWS Confi
D. Use the prebuilt rules or customized rule
E. Subscribe the CI/CD pipeline to anAmazon Simple Notification Service (Amazon SNS) topic that receives notifications from AWS Config.
F. Create rule sets in AWS CloudFormation Guar
G. Run validation checks for CloudFormation templates as a phase of the CI/CD process.
H. Create rule sets as SCP
I. Integrate the SCPs as a part of validation control in a phase of the CI/CD process.

Answer: C

Explanation:
The correct answer is C. Create rule sets in AWS CloudFormation Guard. Run validation checks for CloudFormation templates as a phase of the CI/CD process.
This answer is correct because AWS CloudFormation Guard is a tool that helps you implement policy-as-code for your CloudFormation templates. You can use Guard to write rules that define your security policies, such as requiring encryption for EBS volumes, and then validate your templates against those rules before deploying them. You can integrate Guard into your CI/CD pipeline as a step that runs the validation checks and prevents the deployment of any non-compliant templates12.
The other options are incorrect because:

➤ A. Turning on AWS Trusted Advisor and configuring security notifications as webhooks in the preferences section of the CI/CD pipeline is not a solution, because AWS Trusted Advisor is not a policy-as-code tool, but a service that provides recommendations to help you follow AWS best practices. Trusted Advisor does not allow you to define your own security policies or validate your CloudFormation templates against them3.

➤ B. Turning on AWS Config and using the prebuilt or customized rules is not a solution, because AWS Config is not a policy-as-code tool, but a service that monitors and records the configuration changes of your AWS resources. AWS Config does not allow you to validate your CloudFormation templates before deploying them, but only evaluates the compliance of your resources after they are created4.

➤ D. Creating rule sets as SCPs and integrating them as a part of validation control in a phase of the CI/CD process is not a solution, because SCPs are not policy-as-code tools, but policies that you can use to manage permissions in your AWS Organizations. SCPs do not allow you to validate your CloudFormation templates, but only restrict the actions that users and roles can perform in your accounts5.

References:
1: What is AWS CloudFormation Guard? 2: Introducing AWS CloudFormation Guard 2.0 3: AWS Trusted Advisor 4: What Is AWS Config? 5: Service control policies - AWS Organizations

NEW QUESTION 49
A company has two teams, and each team needs to access its respective Amazon S3 buckets. The company anticipates adding more teams that also will have their own S3 buckets. When the company adds these teams, team members will need the ability to be assigned to multiple teams. Team members also will need the ability to change teams. Additional S3 buckets can be created or deleted.
An IAM administrator must design a solution to accomplish these goals. The solution also must be scalable and must require the least possible operational overhead.
Which solution meets these requirements?

A. Add users to groups that represent the team
B. Create a policy for each team that allows the team to access its respective S3 buckets onl
C. Attach the policy to the corresponding group.
D. Create an IAM role for each tea
E. Create a policy for each team that allows the team to access its respective S3 buckets onl
F. Attach the policy to the corresponding role.
G. Create IAM roles that are labeled with an access tag value of a tea
H. Create one policy that allows dynamic access to S3 buckets with the same ta
I. Attach the policy to the IAM role
J. Tag the S3 buckets accordingly.
K. Implement a role-based access control (RBAC) authorization mode
L. Create the corresponding policies, and attach them to the IAM users.

Answer: A

NEW QUESTION 52
A company is building a data processing application mat uses AWS Lambda functions. The application's Lambda functions need to communicate with an Amazon RDS OB instance that is deployed within a VPC in the same AWS account
Which solution meets these requirements in the MOST secure way?

A. Configure the DB instance to allow public access Update the DB instance security group to allow access from the Lambda public address space for the AWS Region
B. Deploy the Lambda functions inside the VPC Attach a network ACL to the Lambda subnet Provide outbound rule access to the VPC CIDR range only Update the DB instance security group to allow traffic from 0.0.0.0/0
C. Deploy the Lambda functions inside the VPC Attach a security group to the Lambda functions Provide outbound rule access to the VPC CIDR range only Update the DB instance security group to allow traffic from the Lambda security group
D. Peer the Lambda default VPC with the VPC that hosts the DB instance to allow direct network access without the need for security groups

Answer: C

Explanation:
This solution ensures that the Lambda functions are deployed inside the VPC and can communicate with the Amazon RDS DB instance securely. The security group attached to the Lambda functions only allows
outbound traffic to the VPC CIDR range, and the DB instance security group only allows traffic from the Lambda security group. This solution ensures that the Lambda functions can communicate with the DB instance securely and that the DB instance is not exposed to the public internet.

NEW QUESTION 53
A company in France uses Amazon Cognito with the Cognito Hosted Ul as an identity broker for sign-in and sign-up processes. The company is marketing an application and expects that all the application's users will come from France.
When the company launches the application the company's security team observes fraudulent sign-ups for the application. Most of the fraudulent registrations are from users outside of France.
The security team needs a solution to perform custom validation at sign-up Based on the results of the validation the solution must accept or deny the registration request.
Which combination of steps will meet these requirements? (Select TWO.)

A. Create a pre sign-up AWS Lambda trigge
B. Associate the Amazon Cognito function with the Amazon Cognito user pool.
C. Use a geographic match rule statement to configure an AWS WAF web AC
D. Associate the web ACL with the Amazon Cognito user pool.
E. Configure an app client for the application's Amazon Cognito user poo
F. Use the app client ID to validate the requests in the hosted Ul.
G. Update the application's Amazon Cognito user pool to configure a geographic restriction setting.
H. Use Amazon Cognito to configure a social identity provider (IdP) to validate the requests on the hosted Ul.

Answer: B

Explanation:
https://docs.aws.amazon.com/cognito/latest/developerguide/user-pool-lambda-post-authentication.html

NEW QUESTION 54
A security engineer needs to develop a process to investigate and respond to po-tential security events on a company's Amazon EC2 instances. All the EC2 in-stances are backed by Amazon Elastic Block Store (Amazon EBS). The company uses AWS Systems Manager to manage all the EC2 instances and has installed Systems Manager Agent (SSM Agent) on all the EC2 instances.
The process that the security engineer is developing must comply with AWS secu-rity best practices and must meet the following requirements:
• A compromised EC2 instance's volatile memory and non-volatile memory must be preserved for forensic purposes.
• A compromised EC2 instance's metadata must be updated with corresponding inci-dent ticket information.
• A compromised EC2 instance must remain online during the investigation but must be isolated to prevent the spread of malware.
• Any investigative activity during the collection of volatile data must be cap-tured as part of the process. Which combination of steps should the security engineer take to meet these re-quirements with the LEAST
operational overhead? (Select THREE.)

A. Gather any relevant metadata for the compromised EC2 instanc
B. Enable ter-mination protectio
C. Isolate the instance by updating the instance's secu-rity groups to restrict acces
D. Detach the instance from anyAuto Scaling groups that the instance is a member o
E. Deregister the instance from any Elastic Load Balancing (ELB) resources.
F. Gather any relevant metadata for the compromised EC2 instanc
G. Enable ter-mination protectio
H. Move the instance to an isolation subnet that denies all source and destination traffi
I. Associate the instance with the subnet to restrict acces
J. Detach the instance from any Auto Scaling groups that the instance is a member o
K. Deregister the instance from any Elastic Load Balancing (ELB) resources.
L. Use Systems Manager Run Command to invoke scripts that collect volatile data.
M. Establish a Linux SSH or Windows Remote Desktop Protocol (RDP) session to the compromised EC2 instance to invoke scripts that collect volatile data.
N. Create a snapshot of the compromised EC2 instance's EBS volume for follow-up investigation
O. Tag the instance with any relevant metadata and inci-dent ticket information.
P. Create a Systems Manager State Manager association to generate an EBS vol-ume snapshot of the compromised EC2 instanc
Q. Tag the instance with any relevant metadata and incident ticket information.

Answer: ACE

NEW QUESTION 59

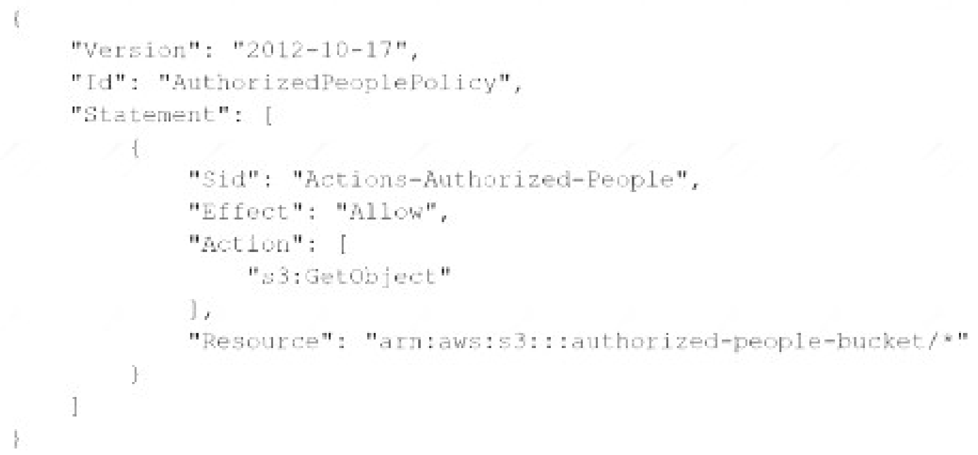
A company is using Amazon Macie, AWS Firewall Manager, Amazon Inspector, and AWS Shield Advanced in its AWS account. The company wants to receive alerts if a DDoS attack occurs against the account.
Which solution will meet this requirement?

A. Use Macie to detect an active DDoS even
B. Create Amazon CloudWatch alarms that respond to Macie findings.
C. Use Amazon Inspector to review resources and to invoke Amazon CloudWatch alarms for any resources that are vulnerable to DDoS attacks.
D. Create an Amazon CloudWatch alarm that monitors Firewall Manager metrics for an active DDoS event.
E. Create an Amazon CloudWatch alarm that monitors Shield Advanced metrics for an active DDoS event.

Answer: D

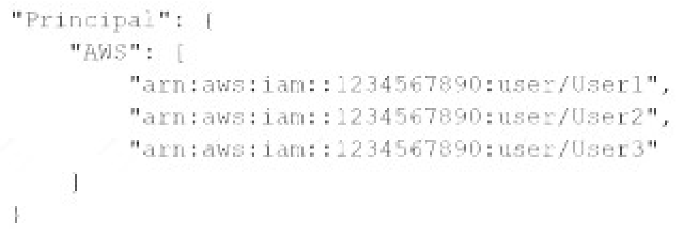
Explanation:
This answer is correct because AWS Shield Advanced is a service that provides comprehensive protection
against DDoS attacks of any size or duration. It also provides metrics and reports on the DDoS attack vectors, duration, and size. You can create an Amazon CloudWatch alarm that monitors Shield Advanced metrics such as DDoSAttackBitsPerSecond, DDoSAttackPacketsPerSecond, and DDoSAttackRequestsPerSecond to receive alerts if a DDoS attack occurs against your account.
For more information, see Monitoring AWS Shield Advanced with Amazon CloudWatch and AWS Shield Advanced metrics and alarms.

NEW QUESTION 62
A security engineer needs to create an Amazon S3 bucket policy to grant least privilege read access to IAM user accounts that are named User=1, User2. and User3. These IAM user accounts are members of the AuthorizedPeople IAM group. The security engineer drafts the following S3 bucket policy:



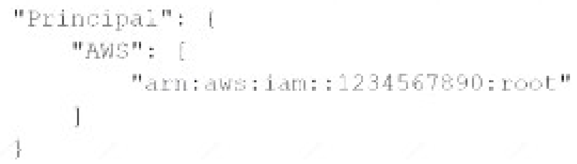
```
{
    "Version": "2012-10-17",
    "Id": "AuthorizedPeoplePolicy",
    "Statement": [
        {
            "Sid": "Actions-Authorized-People",
            "Effect": "Allow",
            "Action": [
                "s3:GetObject"
            ],
            "Resource": "arn:aws:s3:::authorized-people-bucket/*"
        }
    ]
}
```

When the security engineer tries to add the policy to the S3 bucket, the following error message appears: "Missing required field Principal." The security engineer is adding a Principal element to the policy. The addition must provide read access to only User1. User2, and User3. Which solution meets these requirements?
A)



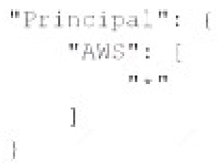
```
"Principal": {
    "AWS": [
        "arn:aws:iam::1234567890:user/User1",
        "arn:aws:iam::1234567890:user/User2",
        "arn:aws:iam::1234567890:user/User3"
    ]
}
```

B)



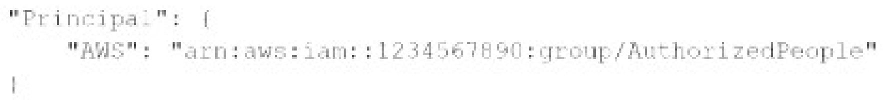
```
"Principal": {
    "AWS": [
        "arn:aws:iam::1234567890:root"
    ]
}
```

C)



```
"Principal": {
    "AWS": [
        "*"
    ]
}
```

D)



```
"Principal": {
    "AWS": "arn:aws:iam::1234567890:group/AuthorizedPeople"
}
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: A

NEW QUESTION 65
A company hosts a public website on an Amazon EC2 instance. HTTPS traffic must be able to access the website. The company uses SSH for management of the web server.
The website is on the subnet 10.0.1.0/24. The management subnet is 192.168.100.0/24. A security engineer must create a security group for the EC2 instance.
Which combination of steps should the security engineer take to meet these requirements in the MOST secure manner? (Select TWO.)

A. Allow port 22 from source 0.0.0.0/0.
B. Allow port 443 from source 0.0.0.0/0.
C. Allow port 22 from 192.168.100.0/24.
D. Allow port 22 from 10.0.1.0/24.
E. Allow port 443 from 10.0.1.0/24.

Answer: BC

Explanation:
The correct answer is B and C.
* B. Allow port 443 from source 0.0.0.0/0.
This is correct because port 443 is used for HTTPS traffic, which must be able to access the website from any source IP address.
* C. Allow port 22 from 192.168.100.0/24.
This is correct because port 22 is used for SSH, which is the management protocol for the web server. The management subnet is 192.168.100.0/24, so only this subnet should be allowed to access port 22.
* A. Allow port 22 from source 0.0.0.0/0.
This is incorrect because it would allow anyone to access port 22, which is a security risk. SSH should be restricted to the management subnet only.
* D. Allow port 22 from 10.0.1.0/24.
This is incorrect because it would allow the website subnet to access port 22, which is unnecessary and a security risk. SSH should be restricted to the management subnet only.
* E. Allow port 443 from 10.0.1.0/24.
This is incorrect because it would limit the HTTPS traffic to the website subnet only, which defeats the purpose of having a public website.

NEW QUESTION 68
A company is hosting a web application on Amazon EC2 instances behind an Application Load Balancer (ALB). The application has become the target of a DoS attack. Application logging shows that requests are coming from small number of client IP addresses, but the addresses change regularly.
The company needs to block the malicious traffic with a solution that requires the least amount of ongoing effort.
Which solution meets these requirements?

A. Create an AWS WAF rate-based rule, and attach it to the ALB.
B. Update the security group that is attached to the ALB to block the attacking IP addresses.
C. Update the ALB subnet's network ACL to block the attacking client IP addresses.
D. Create a AWS WAF rate-based rule, and attach it to the security group of the EC2 instances.

Answer: A

NEW QUESTION 70
A Security Architect has been asked to review an existing security architecture and identify why the application servers cannot successfully initiate a connection to the database servers. The following summary describes the architecture:
* 1 An Application Load Balancer, an internet gateway, and a NAT gateway are configured in the public subnet
* 2. Database, application, and web servers are configured on three different private subnets.
* 3 The VPC has two route tables: one for the public subnet and one for all other subnets The route table for the public subnet has a 0 0 0 0/0 route to the internet gateway The route table for all other subnets has a 0 0.0.0/0 route to the NAT gateway. All private subnets can route to each other
* 4 Each subnet has a network ACL implemented that limits all inbound and outbound connectivity to only the required ports and protocols
* 5 There are 3 Security Groups (SGs) database application and web Each group limits all inbound and outbound connectivity to the minimum required
Which of the following accurately reflects the access control mechanisms the Architect should verify1?

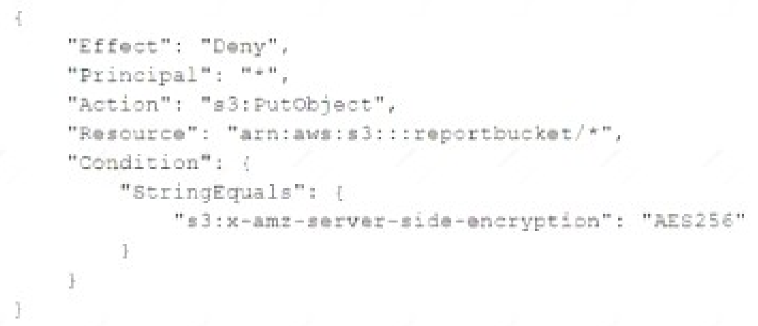
A. Outbound SG configuration on database servers Inbound SG configuration on application servers inbound and outbound network ACL configuration on the database subnet Inbound and outbound network ACL configuration on the application server subnet
B. Inbound SG configuration on database servers Outbound SG configuration on application serversInbound and outbound network ACL configuration on the database subnetInbound and outbound network ACL configuration on the application server subnet
C. Inbound and outbound SG configuration on database servers Inbound and outbound SG configuration on application servers Inbound network ACL configuration on the database subnet Outbound network ACL configuration on the application server subnet
D. Inbound SG configuration on database servers Outbound SG configuration on application servers Inbound network ACL configuration on the database subnet Outbound network ACL configuration on the application server subnet.

Answer: A

Explanation:
this is the accurate reflection of the access control mechanisms that the Architect should verify. Access control mechanisms are methods that regulate who can access what resources and how. Security groups and network ACLs are two types of access control mechanisms that can be applied to EC2 instances and subnets. Security groups are stateful, meaning they remember and return traffic that was previously allowed. Network ACLs are stateless, meaning they do not remember or return traffic that was previously allowed. Security groups and network ACLs can have inbound and outbound rules that specify the source, destination, protocol, and port of the traffic. By verifying the outbound security group configuration on database servers, the inbound security group configuration on application servers, and the inbound and outbound network ACL configuration on both the database and application server subnets, the Architect can check if there are any misconfigurations or conflicts that prevent the application servers from initiating a connection to the database servers. The other options are either inaccurate or incomplete for verifying the access control mechanisms.

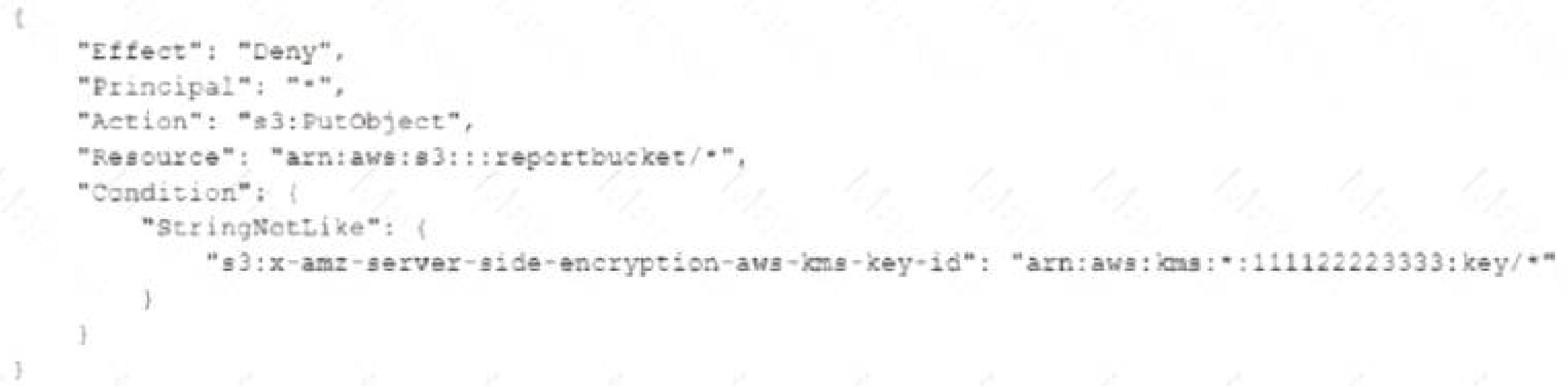
NEW QUESTION 75
A company uses an Amazon S3 bucket to store reports Management has mandated that all new objects stored in this bucket must be encrypted at rest using server-side encryption with a client-specified IAM Key Management Service (IAM KMS) CMK owned by the same account as the S3 bucket. The IAM account number is 111122223333, and the bucket name Is report bucket. The company's security specialist must write the S3 bucket policy to ensure the mandate can be Implemented
Which statement should the security specialist include in the policy?

A.



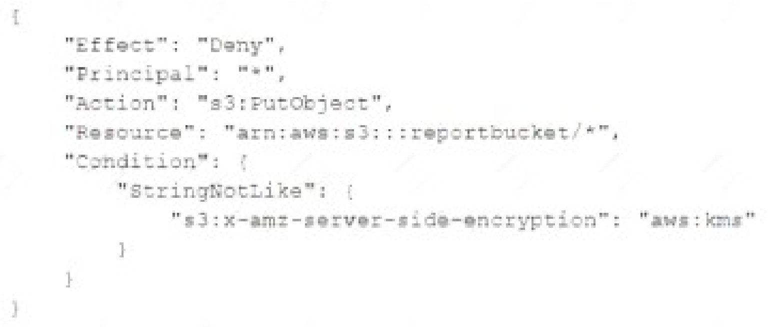
```
{
    "Effect": "Deny",
    "Principal": "*",
    "Action": "s3:PutObject",
    "Resource": "arn:aws:s3:::reportbucket/*",
    "Condition": {
        "StringEquals": {
            "s3:x-amz-server-side-encryption": "AES256"
        }
    }
}
```

B.



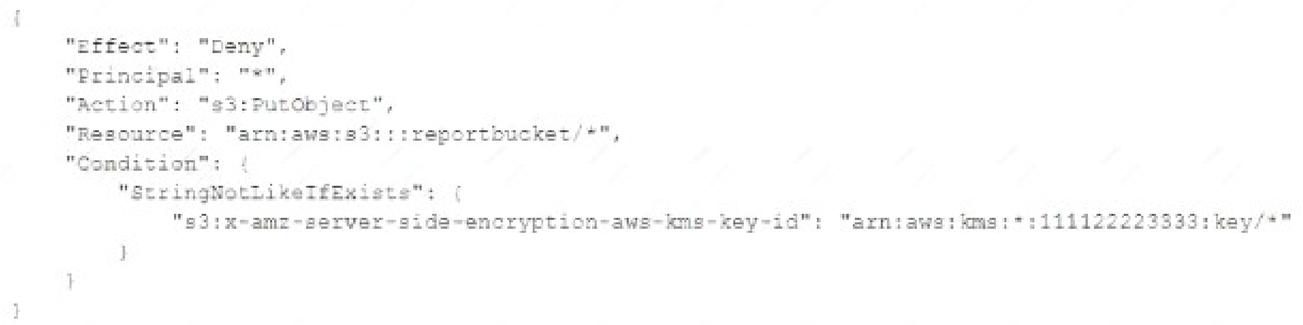
```
{
    "Effect": "Deny",
    "Principal": "*",
    "Action": "s3:PutObject",
    "Resource": "arn:aws:s3:::reportbucket/*",
    "Condition": {
        "StringNotLike": {
            "s3:x-amz-server-side-encryption-aws-kms-key-id": "arn:aws:kms:*:111122223333:key/*"
        }
    }
}
```

C.



```
{
    "Effect": "Deny",
    "Principal": "*",
    "Action": "s3:PutObject",
    "Resource": "arn:aws:s3:::reportbucket/*",
    "Condition": {
        "StringNotLike": {
            "s3:x-amz-server-side-encryption": "aws:kms"
        }
    }
}
```

D.



```
{
    "Effect": "Deny",
    "Principal": "*",
    "Action": "s3:PutObject",
    "Resource": "arn:aws:s3:::reportbucket/*",
    "Condition": {
        "StringNotLikeIfExists": {
            "s3:x-amz-server-side-encryption-aws-kms-key-id": "arn:aws:kms:*:111122223333:key/*"
        }
    }
}
```

E. Option A
F. Option B
G. Option C
H. Option D

Answer: D

NEW QUESTION 76

A company is using an AWS Key Management Service (AWS KMS) AWS owned key in its application to encrypt files in an AWS account The company's security team wants the ability to change to new key material for new files whenever a potential key breach occurs A security engineer must implement a solution that gives the security team the ability to change the key whenever the team wants to do so
Which solution will meet these requirements?

A. Create a new customer managed key Add a key rotation schedule to the key Invoke the key rotation schedule every time the security team requests a key change
B. Create a new AWS managed key Add a key rotation schedule to the key Invoke the key rotation schedule every time the security team requests a key change
C. Create a key alias Create a new customer managed key every time the security team requests a key change Associate the alias with the new key
D. Create a key alias Create a new AWS managed key every time the security team requests a key change Associate the alias with the new key

Answer: A

Explanation:

To meet the requirement of changing the key material for new files whenever a potential key breach occurs, the most appropriate solution would be to create a new customer managed key, add a key rotation schedule to the key, and invoke the key rotation schedule every time the security team requests a key change.
References: : Rotating AWS KMS keys - AWS Key Management Service

NEW QUESTION 78

A company plans to use AWS Key Management Service (AWS KMS) to implement an encryption strategy to protect data at rest. The company requires client-side encryption for company projects. The company is currently conducting multiple projects to test the company's use of AWS KMS. These tests have led to a sudden increase in the company's AWS resource consumption. The test projects include applications that issue multiple requests each second to KMS endpoints for encryption activities.
The company needs to develop a solution that does not throttle the company's ability to use AWS KMS. The solution must improve key usage for client-side encryption and must be cost optimized. Which solution will meet these requirements?

A. Use keyrings with the AWS Encryption SD
B. Use each keyring individually or combine keyrings into amulti-keyrin
C. Decrypt the data by using a keyring that has the primary key in the multi-keyring.
D. Use data key cachin
E. Use the local cache that the AWS Encryption SDK provides with a caching cryptographic materials manager.

F. Use KMS key rotatio
G. Use a local cache in the AWS Encryption SDK with a caching cryptographic materials manager.
H. Use keyrings with the AWS Encryption SD
I. Use each keyring individually or combine keyrings into a multi-keyrin
J. Use any of the wrapping keys in the multi-keyring to decrypt the data.

Answer: B

Explanation:
The correct answer is B. Use data key caching. Use the local cache that the AWS Encryption SDK provides with a caching cryptographic materials manager.
This answer is correct because data key caching can improve performance, reduce cost, and help the company stay within the service limits of AWS KMS. Data key caching stores data keys and related cryptographic material in a cache, and reuses them for encryption and decryption operations. This reduces the number of requests to AWS KMS endpoints and avoids throttling. The AWS Encryption SDK provides a local cache and a caching cryptographic materials manager (caching CMM) that interacts with the cache and enforces security thresholds that the company can set1.
The other options are incorrect because:

- A. Using keyrings with the AWS Encryption SDK does not address the problem of throttling or cost optimization. Keyrings are used to generate, encrypt, and decrypt data keys, but they do not cache or reuse them. Using each keyring individually or combining them into a multi-keyring does not reduce the number of requests to AWS KMS endpoints2.
- C. Using KMS key rotation does not address the problem of throttling or cost optimization. Key rotation is a security practice that creates new cryptographic material for a KMS key every year, but it does not affect the data that the KMS key protects. Key rotation does not reduce the number of requests to AWS KMS endpoints, and it might incur additional costs for storing multiple versions of key material3.
- D. Using keyrings with the AWS Encryption SDK does not address the problem of throttling or cost optimization, as explained in option A. Moreover, using any of the wrapping keys in the multi-keyring to decrypt the data is not a valid option, because only one of the wrapping keys can decrypt a given data key. The wrapping key that encrypts a data key is stored in the encrypted data key structure, and only that wrapping key can decrypt it4.

References:
1: Data key caching - AWS Encryption SDK 2: Using keyrings - AWS Encryption SDK 3: Rotating AWS KMS keys - AWS Key Management Service 4: How keyrings work - AWS Encryption SDK

NEW QUESTION 83
A web application gives users the ability to log in verify their membership's validity and browse artifacts that are stored in an Amazon S3 bucket. When a user attempts to download an object, the application must verify the permission to access the object and allow the user to download the object from a custom domain name such as example com.
What is the MOST secure way for a security engineer to implement this functionality?

A. Configure read-only access to the object by using a bucket AC
B. Remove the access after a set time has elapsed.
C. Implement an IAM policy to give the user read access to the S3 bucket.
D. Create an S3 presigned URL Provide the S3 presigned URL to the user through the application.
E. Create an Amazon CloudFront signed UR
F. Provide the CloudFront signed URL to the user through the application.

Answer: D

Explanation:
For this scenario you would need to set up static website hosting because a custom domain name is listed as a requirement. "Amazon S3 website endpoints do not support HTTPS or access points. If you want to use HTTPS, you can use Amazon CloudFront to serve a static website hosted on Amazon S3." This is not secure. https://docs.aws.amazon.com/AmazonS3/latest/userguide/website-hosting-custom-domain-walkthrough.html CloudFront signed URLs allow much more fine-grained control as well as HTTPS access with custom domain names:
https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/private-content-signed-urls.html

NEW QUESTION 84
A Security Engineer creates an Amazon S3 bucket policy that denies access to all users. A few days later, the Security Engineer adds an additional statement to the bucket policy to allow read-only access to one other employee. Even after updating the policy, the employee still receives an access denied message.
What is the likely cause of this access denial?

A. The ACL in the bucket needs to be updated
B. The IAM policy does not allow the user to access the bucket
C. It takes a few minutes for a bucket policy to take effect
D. The allow permission is being overridden by the deny

Answer: D

NEW QUESTION 85
A company's Chief Security Officer has requested that a Security Analyst review and improve the security posture of each company IAM account The Security Analyst decides to do this by Improving IAM account root user security.
Which actions should the Security Analyst take to meet these requirements? (Select THREE.)

A. Delete the access keys for the account root user in every account.
B. Create an admin IAM user with administrative privileges and delete the account root user in every account.
C. Implement a strong password to help protect account-level access to the IAM Management Console by the account root user.
D. Enable multi-factor authentication (MFA) on every account root user in all accounts.
E. Create a custom IAM policy to limit permissions to required actions for the account root user and attach the policy to the account root user.
F. Attach an IAM role to the account root user to make use of the automated credential rotation in IAM STS.

Answer: ADE

Explanation:
because these are the actions that can improve IAM account root user security. IAM account root user is a user that has complete access to all AWS resources and services in an account. IAM account root user security is a set of best practices that help protect the account root user from unauthorized or accidental use.

Deleting the access keys for the account root user in every account can help prevent programmatic access by the account root user, which reduces the risk of compromise or misuse. Enabling MFA on every account root user in all accounts can help add an extra layer of security for console access by requiring a verification code in addition to a password. Creating a custom IAM policy to limit permissions to required actions for the account root user and attaching the policy to the account root user can help enforce the principle of least privilege and restrict the account root user from performing unnecessary or dangerous actions. The other options are either invalid or ineffective for improving IAM account root user security.

NEW QUESTION 90
A development team is attempting to encrypt and decode a secure string parameter from the IAM Systems Manager Parameter Store using an IAM Key Management Service (IAM KMS) CMK. However, each attempt results in an error message being sent to the development team.
Which CMK-related problems possibly account for the error? (Select two.)

A. The CMK is used in the attempt does not exist.
B. The CMK is used in the attempt needs to be rotated.
C. The CMK is used in the attempt is using the CMK€™s key ID instead of the CMK ARN.
D. The CMK is used in the attempt is not enabled.
E. The CMK is used in the attempt is using an alias.

Answer: AD

Explanation:
https://docs.IAM.amazon.com/kms/latest/developerguide/services-parameter-store.html#parameter-store-cmk-fa

NEW QUESTION 95
A security team is developing an application on an Amazon EC2 instance to get objects from an Amazon S3 bucket. All objects in the S3 bucket are encrypted with an AWS Key Management Service (AWS KMS) customer managed key. All network traffic for requests that are made within the VPC is restricted to the AWS infrastructure. This traffic does not traverse the public internet.
The security team is unable to get objects from the S3 bucket Which factors could cause this issue? (Select THREE.)

A. The IAM instance profile that is attached to the EC2 instance does not allow the s3 ListBucket action to the S3: bucket in the AWS accounts.
B. The I AM instance profile that is attached to the EC2 instance does not allow the s3 ListParts action to the S3; bucket in the AWS accounts.
C. The KMS key policy that encrypts the object in the S3 bucket does not allow the kms; ListKeys action to the EC2 instance profile ARN.
D. The KMS key policy that encrypts the object in the S3 bucket does not allow the kms Decrypt action to the EC2 instance profile ARN.
E. The security group that is attached to the EC2 instance is missing an outbound rule to the S3 managed prefix list over port 443.
F. The security group that is attached to the EC2 instance is missing an inbound rule from the S3 managed prefix list over port 443.

Answer: ADE

Explanation:
https://docs.aws.amazon.com/vpc/latest/userguide/security-group-rules.html
To get objects from an S3 bucket that are encrypted with a KMS customer managed key, the security team needs to have the following factors in place:
➢ The IAM instance profile that is attached to the EC2 instance must allow the s3:GetObject action to the S3 bucket or object in the AWS account. This permission is required to read the object from S3. Option A is incorrect because it specifies the s3:ListBucket action, which is only required to list the objects in the bucket, not to get them.
➢ The KMS key policy that encrypts the object in the S3 bucket must allow the kms:Decrypt action to the EC2 instance profile ARN. This permission is required to decrypt the object using the KMS key. Option D is correct.
➢ The security group that is attached to the EC2 instance must have an outbound rule to the S3 managed prefix list over port 443. This rule is required to allow HTTPS traffic from the EC2 instance to S3 within the AWS infrastructure. Option E is correct. Option B is incorrect because it specifies the s3:ListParts action, which is only required for multipart uploads, not for getting objects. Option C is incorrect
because it specifies the kms:ListKeys action, which is not required for getting objects. Option F is incorrect because it specifies an inbound rule from the S3 managed prefix list, which is not required for getting objects. Verified References:
➢ https://docs.aws.amazon.com/kms/latest/developerguide/control-access.html
➢ https://docs.aws.amazon.com/vpc/latest/userguide/vpc-endpoints-s3.html

NEW QUESTION 100
A company hosts business-critical applications on Amazon EC2 instances in a VPC. The VPC uses default DHCP options sets. A security engineer needs to log all DNS queries that internal resources make in the VPC. The security engineer also must create a list of the most common DNS queries over time.
Which solution will meet these requirements?

A. Install the Amazon CloudWatch agent on each EC2 instance in the VP
B. Use the CloudWatch agent to stream the DNS query logs to an Amazon CloudWatch Logs log grou
C. Use CloudWatch metric filters to automatically generate metrics that list the most common ONS queries.
D. Install a BIND DNS server in the VP
E. Create a bash script to list the DNS request number of common DNS queries from the BIND logs.
F. Create VPC flow logs for all subnets in the VP
G. Stream the flow logs to an Amazon CloudWatch Logs log grou
H. Use CloudWatch Logs Insights to list the most common DNS queries for the log group in a custom dashboard.
I. Configure Amazon Route 53 Resolver query loggin
J. Add an Amazon CloudWatch Logs log group as the destinatio
K. Use Amazon CloudWatch Contributor Insights to analyze the data and create time series that display the most common DNS queries.

Answer: D

Explanation:
https://aws.amazon.com/blogs/aws/log-your-vpc-dns-queries-with-route-53-resolver-query-logs/

NEW QUESTION 104
A company has a legacy application that runs on a single Amazon EC2 instance. A security audit shows that the application has been using an IAM access key

within its code to access an Amazon S3 bucket that is named DOC-EXAMPLE-BUCKET1 in the same AWS account. This access key pair has the s3:GetObject permission to all objects in only this S3 bucket. The company takes the application offline because the application is not compliant with the company's security policies for accessing other AWS resources from Amazon EC2.
A security engineer validates that AWS CloudTrail is turned on in all AWS Regions. CloudTrail is sending logs to an S3 bucket that is named DOC-EXAMPLE-BUCKET2. This S3 bucket is in the same AWS account as DOC-EXAMPLE-BUCKET1. However, CloudTrail has not been configured to send logs to Amazon CloudWatch Logs.
The company wants to know if any objects in DOC-EXAMPLE-BUCKET1 were accessed with the IAM access key in the past 60 days. If any objects were accessed, the company wants to know if any of the objects that are text files (.txt extension) contained personally identifiable information (PII).
Which combination of steps should the security engineer take to gather this information? (Choose two.)

A. Configure Amazon Macie to identify any objects in DOC-EXAMPLE-BUCKET1 that contain PII and that were available to the access key.
B. Use Amazon CloudWatch Logs Insights to identify any objects in DOC-EXAMPLE-BUCKET1 that contain PII and that were available to the access key.
C. Use Amazon OpenSearch Service (Amazon Elasticsearch Service) to query the CloudTrail logs in DOC-EXAMPLE-BUCKET2 for API calls that used the access key to access an object that contained PII.
D. Use Amazon Athena to query the CloudTrail logs in DOC-EXAMPLE-BUCKET2 for any API calls that used the access key to access an object that contained PII.
E. Use AWS Identity and Access Management Access Analyzer to identify any API calls that used the access key to access objects that contained PII in DOC-EXAMPLE-BUCKET1.

Answer: AD

NEW QUESTION 109
Which of the following are valid configurations for using SSL certificates with Amazon CloudFront? (Select THREE)

A. Default AWS Certificate Manager certificate
B. Custom SSL certificate stored in AWS KMS
C. Default CloudFront certificate
D. Custom SSL certificate stored in AWS Certificate Manager
E. Default SSL certificate stored in AWS Secrets Manager
F. Custom SSL certificate stored in AWS IAM

Answer: ABC

Explanation:
The key length for an RSA certificate that you use with CloudFront is 2048 bits, even though ACM supports larger keys. If you use an imported certificate with CloudFront, your key length must be 1024 or 2048 bits and cannot exceed 2048 bits. You must import the certificate in the US East (N. Virginia) Region. You must have permission to use and import the SSL/TLS certificate
https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/cnames-and-https-requirements.html

NEW QUESTION 113
A company uses AWS Organizations to manage several AWs accounts. The company processes a large volume of sensitive data. The company uses a serverless approach to microservices. The company stores all the data in either Amazon S3 or Amazon DynamoDB. The company reads the data by using either AWS lambda functions or container-based services that the company hosts on Amazon Elastic Kubernetes Service (Amazon EKS) on AWS Fargate.
The company must implement a solution to encrypt all the data at rest and enforce least privilege data access controls. The company creates an AWS Key Management Service (AWS KMS) customer managed key.
What should the company do next to meet these requirements?

A. Create a key policy that allows the kms:Decrypt action only for Amazon S3 and DynamoD
B. Create an SCP that denies the creation of S3 buckets and DynamoDB tables that are not encrypted with the key.
C. Create an 1AM policy that denies the kms:Decrypt action for the ke
D. Create a Lambda function than runs on a schedule to attach the policy to any new role
E. Create an AWS Config rule to send alerts for resources that are not encrypted with the key.
F. Create a key policy that allows the kms:Decrypt action only for Amazon S3, DynamoDB, Lambda, and Amazon EK
G. Create an SCP that denies the creation of S3 buckets and DynamoDB tables that are not encrypted with the key.
H. Create a key policy that allows the kms:Decrypt action only for Amazon S3, DynamoDB, Lambda, and Amazon EK
I. Create an AWS Config rule to send alerts for resources that are not encrypted with the key.

Answer: B

NEW QUESTION 116
A company uses AWS Organizations to manage a multi-accountAWS environment in a single AWS Region. The organization's management account is named management-01. The company has turned on AWS Config in all accounts in the organization. The company has designated an account named security-01 as the delegated administra-tor for AWS Config.
All accounts report the compliance status of each account's rules to the AWS Config delegated administrator account by using an AWS Config aggregator. Each account administrator can configure and manage the account's own AWS Config rules to handle each account's unique compliance requirements.
A security engineer needs to implement a solution to automatically deploy a set of 10 AWS Config rules to all existing and future AWS accounts in the organiza-tion. The solution must turn on AWS Config automatically during account crea-tion.
Which combination of steps will meet these requirements? (Select TWO.)

A. Create an AWS CloudFormation template that contains the 1 0 required AVVS Config rule
B. Deploy the template by using CloudFormation StackSets in the security-01 account.
C. Create a conformance pack that contains the 10 required AWS Config rule
D. Deploy the conformance pack from the security-01 account.
E. Create a conformance pack that contains the 10 required AWS Config rule
F. Deploy the conformance pack from the management-01 account.
G. Create an AWS CloudFormation template that will activate AWS Confi
H. De-ploy the template by using CloudFormation StackSets in the security-01 ac-count.
I. Create an AWS CloudFormation template that will activate AWS Confi
J. De-ploy the template by using CloudFormation StackSets in the management-01 account.

Answer: BE

NEW QUESTION 117
A security engineer is using AWS Organizations and wants to optimize SCPs. The security engineer needs to ensure that the SCPs conform to best practices.
Which approach should the security engineer take to meet this requirement?

A. Use AWS IAM Access Analyzer to analyze the policie
B. View the findings from policy validation checks.
C. Review AWS Trusted Advisor checks for all accounts in the organization.
D. Set up AWS Audit Manage
E. Run an assessment for all AWS Regions for all accounts.
F. Ensure that Amazon Inspector agents are installed on all Amazon EC2 in-stances in all accounts.

Answer: A

NEW QUESTION 119
A company used a lift-and-shift approach to migrate from its on-premises data centers to the AWS Cloud. The company migrated on-premises VMS to Amazon EC2 in-stances. Now the company wants to replace some of components that are running on the EC2 instances with managed AWS services that provide similar functionality.
Initially, the company will transition from load balancer software that runs on EC2 instances to AWS Elastic Load Balancers. A security engineer must ensure that after this transition, all the load balancer logs are centralized and searchable for auditing. The security engineer must also ensure that metrics are generated to show which ciphers are in use.
Which solution will meet these requirements?

A. Create an Amazon CloudWatch Logs log grou
B. Configure the load balancers to send logs to the log grou
C. Use the CloudWatch Logs console to search the log
D. Create CloudWatch Logs filters on the logs for the required met-rics.
E. Create an Amazon S3 bucke
F. Configure the load balancers to send logs to the S3 bucke
G. Use Amazon Athena to search the logs that are in the S3 bucke
H. Create Amazon CloudWatch filters on the S3 log files for the re-quired metrics.
I. Create an Amazon S3 bucke
J. Configure the load balancers to send logs to the S3 bucke
K. Use Amazon Athena to search the logs that are in the S3 bucke
L. Create Athena queries for the required metric
M. Publish the metrics to Amazon CloudWatch.
N. Create an Amazon CloudWatch Logs log grou
O. Configure the load balancers to send logs to the log grou
P. Use the AWS Management Console to search the log
Q. Create Amazon Athena queries for the required metric
R. Publish the metrics to Amazon CloudWatch.

Answer: C

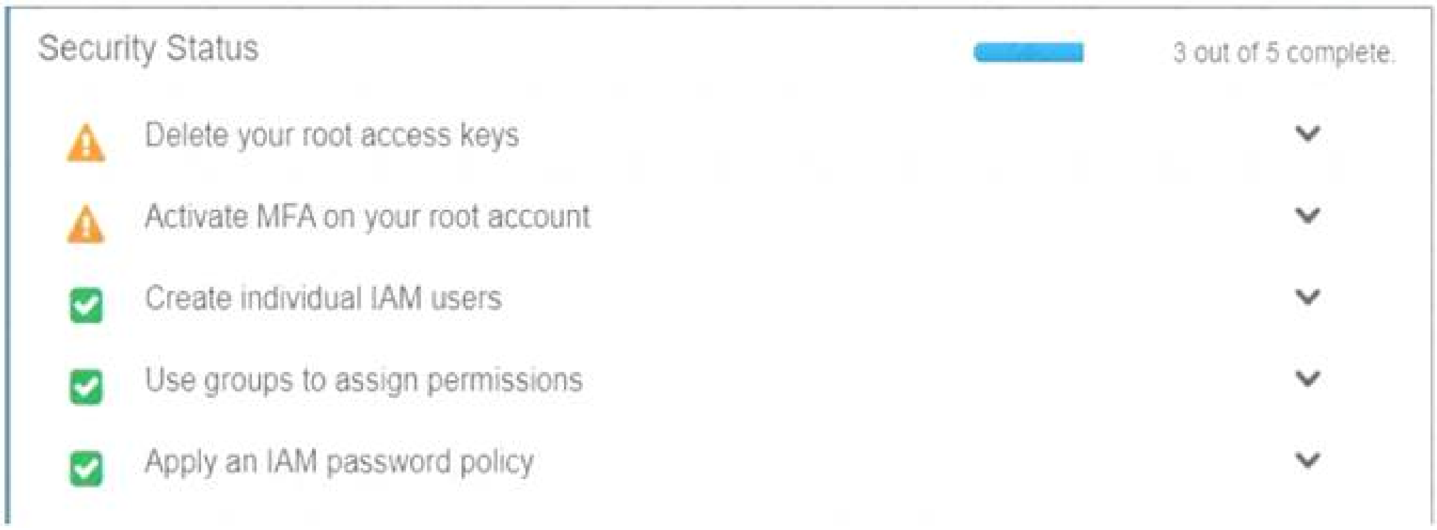
Explanation:
- Amazon S3 is a service that provides scalable, durable, and secure object storage. You can use Amazon S3 to store and retrieve any amount of data from anywhere on the web1
- AWS Elastic Load Balancing is a service that distributes incoming application or network traffic across multiple targets, such as EC2 instances, containers, or IP addresses. You can use Elastic Load Balancing to increase the availability and fault tolerance of your applications2
- Elastic Load Balancing supports access logging, which captures detailed information about requests sent to your load balancer. Each log contains information such as the time the request was received, the client’s IP address, latencies, request paths, and server responses. You can use access logs to analyze traffic patterns and troubleshoot issues3
- You can configure your load balancer to store access logs in an Amazon S3 bucket that you specify.
You can also specify the interval for publishing the logs, which can be 5 or 60 minutes. The logs are stored in a hierarchical folder structure by load balancer name, IP address, year, month, day, and time.
- Amazon Athena is a service that allows you to analyze data in Amazon S3 using standard SQL. You can use Athena to run ad-hoc queries and get results in seconds. Athena is serverless, so there is no infrastructure to manage and you pay only for the queries that you run.
- You can use Athena to search the access logs that are stored in your S3 bucket. You can create a table in Athena that maps to your S3 bucket and then run SQL queries on the table. You can also use the Athena console or API to view and download the query results.
- You can also use Athena to create queries for the required metrics, such as the number of requests per cipher or protocol. You can then publish the metrics to Amazon CloudWatch, which is a service that monitors and manages your AWS resources and applications. You can use CloudWatch to collect and track metrics, create alarms, and automate actions based on the state of your resources.
- By using this solution, you can meet the requirements of ensuring that all the load balancer logs are centralized and searchable for auditing and that metrics are generated to show which ciphers are in use.

NEW QUESTION 123
Your CTO is very worried about the security of your IAM account. How best can you prevent hackers from completely hijacking your account?
Please select:

A. Use short but complex password on the root account and any administrators.
B. Use IAM IAM Geo-Lock and disallow anyone from logging in except for in your city.
C. Use MFA on all users and accounts, especially on the root account.
D. Don't write down or remember the root account password after creating the IAM account.

Answer: C

Explanation:
Multi-factor authentication can add one more layer of security to your IAM account Even when you go to your Security Credentials dashboard one of the items is to enable MFA on your root account
C:\Users\wk\Desktop\mudassar\Untitled.jpg



Security Status — 3 out of 5 complete.

- ⚠ Delete your root access keys
- ⚠ Activate MFA on your root account
- ✓ Create individual IAM users
- ✓ Use groups to assign permissions
- ✓ Apply an IAM password policy

Option A is invalid because you need to have a good password policy Option B is invalid because there is no IAM Geo-Lock Option D is invalid because this is not a recommended practices For more information on MFA, please visit the below URL
http://docs.IAM.amazon.com/IAM/latest/UserGuide/id
credentials mfa.htmll
The correct answer is: Use MFA on all users and accounts, especially on the root account. Submit your Feedback/Queries to our Experts

NEW QUESTION 124
A security engineer needs to implement a write-once-read-many (WORM) model for data that a company will store in Amazon S3 buckets. The company uses the S3 Standard storage class for all of its S3 buckets. The security engineer must en-sure that objects cannot be overwritten or deleted by any user, including the AWS account root user.
Which solution will meet these requirements?

A. Create new S3 buckets with S3 Object Lock enabled in compliance mod
B. Place objects in the S3 buckets.
C. Use S3 Glacier Vault Lock to attach a Vault Lock policy to new S3 bucket
D. Wait 24 hours to complete the Vault Lock proces
E. Place objects in the S3 buckets.
F. Create new S3 buckets with S3 Object Lock enabled in governance mod
G. Place objects in the S3 buckets.
H. Create new S3 buckets with S3 Object Lock enabled in governance mod
I. Add a legal hold to the S3 bucket
J. Place objects in the S3 buckets.

Answer: A

NEW QUESTION 128
An international company wants to combine AWS Security Hub findings across all the company's AWS Regions and from multiple accounts. In addition, the company
wants to create a centralized custom dashboard to correlate these findings with operational data for deeper
analysis and insights. The company needs an analytics tool to search and visualize Security Hub findings. Which combination of steps will meet these requirements? (Select THREE.)

A. Designate an AWS account as a delegated administrator for Security Hu
B. Publish events to Amazon CloudWatch from the delegated administrator account, all member accounts, and required Regions that are enabled for Security Hub findings.
C. Designate an AWS account in an organization in AWS Organizations as a delegated administrator for Security Hu
D. Publish events to Amazon EventBridge from the delegated administrator account, all member accounts, and required Regions that are enabled for Security Hub findings.
E. In each Region, create an Amazon EventBridge rule to deliver findings to an Amazon Kinesis data strea
F. Configure the Kinesis data streams to output the logs to a single Amazon S3 bucket.
G. In each Region, create an Amazon EventBridge rule to deliver findings to an Amazon Kinesis Data Firehose delivery strea
H. Configure the Kinesis Data Firehose delivery streams to deliver the logs to a single Amazon S3 bucket.
I. Use AWS Glue DataBrew to crawl the Amazon S3 bucket and build the schem
J. Use AWS Glue Data Catalog to query the data and create views to flatten nested attribute
K. Build Amazon QuickSight dashboards by using Amazon Athena.
L. Partition the Amazon S3 dat
M. Use AWS Glue to crawl the S3 bucket and build the schem
N. Use Amazon Athena to query the data and create views to flatten nested attribute
O. Build Amazon QuickSight dashboards that use the Athena views.

Answer: BDF

Explanation:
The correct answer is B, D, and F. Designate an AWS account in an organization in AWS Organizations as a delegated administrator for Security Hub. Publish events to Amazon EventBridge from the delegated administrator account, all member accounts, and required Regions that are enabled for Security Hub findings. In each Region, create an Amazon EventBridge rule to deliver findings to an Amazon Kinesis Data Firehose delivery stream. Configure the Kinesis Data Firehose delivery streams to deliver the logs to a single Amazon S3 bucket. Partition the Amazon S3 data. Use AWS Glue to crawl the S3 bucket and build the schema. Use Amazon Athena to query the data and create views to flatten nested attributes. Build Amazon QuickSight dashboards that use the Athena views.
According to the AWS documentation, AWS Security Hub is a service that provides you with a comprehensive view of your security state across your AWS accounts, and helps you check your environment against security standards and best practices. You can use Security Hub to aggregate security findings from various sources, such as AWS services, partner products, or your own applications.

To use Security Hub with multiple AWS accounts and Regions, you need to enable AWS Organizations with all features enabled. This allows you to centrally manage your accounts and apply policies across your organization. You can also use Security Hub as a service principal for AWS Organizations, which lets you designate a delegated administrator account for Security Hub. The delegated administrator account can enable Security Hub automatically in all existing and future accounts in your organization, and can view and manage findings from all accounts.

According to the AWS documentation, Amazon EventBridge is a serverless event bus that makes it easy to connect applications using data from your own applications, integrated software as a service (SaaS) applications, and AWS services. You can use EventBridge to create rules that match events from various sources and route them to targets for processing.

To use EventBridge with Security Hub findings, you need to enable Security Hub as an event source in EventBridge. This will allow you to publish events from Security Hub to EventBridge in the same Region. You can then create EventBridge rules that match Security Hub findings based on criteria such as severity, type, or resource. You can also specify targets for your rules, such as Lambda functions, SNS topics, or Kinesis Data Firehose delivery streams.

According to the AWS documentation, Amazon Kinesis Data Firehose is a fully managed service that delivers real-time streaming data to destinations such as Amazon S3, Amazon Redshift, Amazon Elasticsearch Service (Amazon ES), and Splunk. You can use Kinesis Data Firehose to transform and enrich your data before delivering it to your destination.

To use Kinesis Data Firehose with Security Hub findings, you need to create a Kinesis Data Firehose delivery stream in each Region where you have enabled Security Hub. You can then configure the delivery stream to receive events from EventBridge as a source, and deliver the logs to a single S3 bucket as a destination. You can also enable data transformation or compression on the delivery stream if needed.

According to the AWS documentation, Amazon S3 is an object storage service that offers scalability, data availability, security, and performance. You can use S3 to store and retrieve any amount of data from anywhere on the web. You can also use S3 features such as lifecycle management, encryption, versioning, and replication to optimize your storage.

To use S3 with Security Hub findings, you need to create an S3 bucket that will store the logs from Kinesis Data Firehose delivery streams. You can then partition the data in the bucket by using prefixes such as account ID or Region. This will improve the performance and cost-effectiveness of querying the data.

According to the AWS documentation, AWS Glue is a fully managed extract, transform, and load (ETL) service that makes it easy to prepare and load your data for analytics. You can use Glue to crawl your data sources, identify data formats, and suggest schemas and transformations. You can also use Glue Data Catalog as a central metadata repository for your data assets.

To use Glue with Security Hub findings, you need to create a Glue crawler that will crawl the S3 bucket and build the schema for the data. The crawler will create tables in the Glue Data Catalog that you can query using standard SQL.

According to the AWS documentation, Amazon Athena is an interactive query service that makes it easy to analyze data in Amazon S3 using standard SQL. Athena is serverless, so there is no infrastructure to manage, and you pay only for the queries that you run. You can use Athena with Glue Data Catalog as a metadata store for your tables.

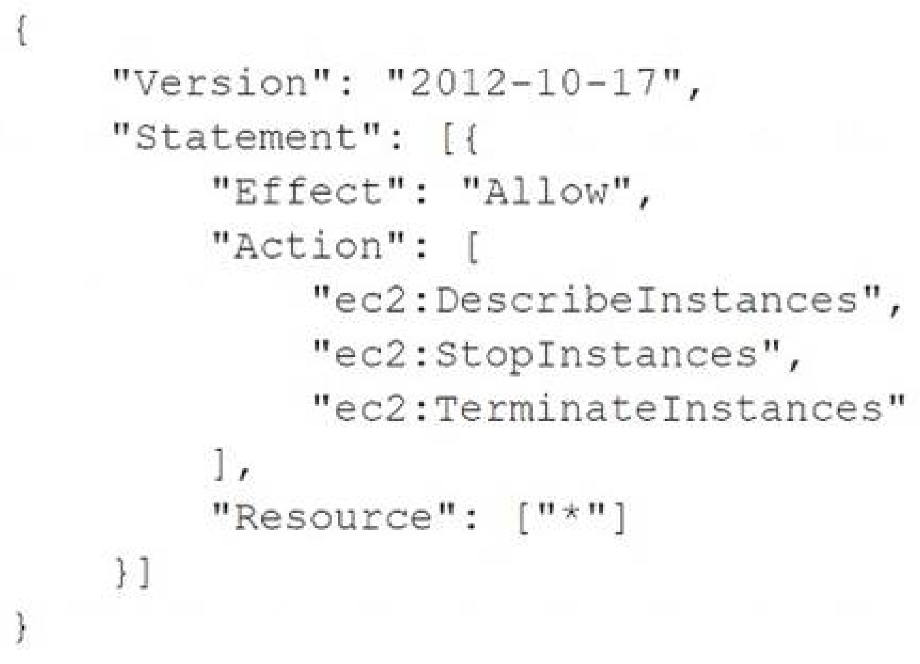
To use Athena with Security Hub findings, you need to create views in Athena that will flatten nested attributes in the data. For example, you can create views that extract fields such as account ID, Region, resource type, resource ID, finding type, finding title, and finding description from the JSON data. You can then query the views using SQL and join them with other tables if needed.

According to the AWS documentation, Amazon QuickSight is a fast, cloud-powered business intelligence
service that makes it easy to deliver insights to everyone in your organization. You can use QuickSight to create and publish interactive dashboards that include machine learning insights. You can also use QuickSight to connect to various data sources, such as Athena, S3, or RDS.

To use QuickSight with Security Hub findings, you need to create QuickSight dashboards that use the Athena views as data sources. You can then visualize and analyze the findings using charts, graphs, maps, or tables. You can also apply filters, calculations, or aggregations to the data. You can then share the dashboards with your users or embed them in your applications.

NEW QUESTION 133

A security engineer is designing an IAM policy to protect AWS API operations. The policy must enforce multi-factor authentication (MFA) for IAM users to access certain services in the AWS production account. Each session must remain valid for only 2 hours. The current version of the IAM policy is as follows:



```
{
     "Version": "2012-10-17",
     "Statement": [{
          "Effect": "Allow",
          "Action": [
               "ec2:DescribeInstances",
               "ec2:StopInstances",
               "ec2:TerminateInstances"
          ],
          "Resource": ["*"]
     }]
}
```

Which combination of conditions must the security engineer add to the IAM policy to meet these
requirements? (Select TWO.)

A. "Bool " : " aws : Multi FactorAuthPresent": "true" }
B. "B001 " : " aws : MultiFactorAuthPresent": "false" }
C. "NumericLessThan" : { " aws : Multi FactorAuthAge" : "7200"}
D. "NumericGreaterThan" : { " aws : MultiFactorAuthAge " : "7200"
E. "NumericLessThan" : { "MaxSessionDuration " : "7200"}

Answer: AC

Explanation:
The correct combination of conditions to add to the IAM policy is A and C. These conditions will ensure that IAM users must use MFA to access certain services in the AWS production account, and that each session will expire after 2 hours.

- Option A: “Bool” : { “aws:MultiFactorAuthPresent” : “true” } is a valid condition that checks if the principal (the IAM user) has authenticated with MFA before making the request. This condition will enforce MFA for the IAM users to access the specified services. This condition key is supported by all AWS services that support IAM policies1.
- Option B: “Bool” : { “aws:MultiFactorAuthPresent” : “false” } is the opposite of option A. This condition will allow access only if the principal has not authenticated with MFA, which is not the desired requirement. This condition key is supported by all AWS services that support IAM policies1.

- Option C: “NumericLessThan” : { “aws:MultiFactorAuthAge” : “7200” } is a valid condition that checks if the time since the principal authenticated with MFA is less than 7200 seconds (2 hours). This condition will enforce the session duration limit for the IAM users. This condition key is supported by all AWS services that support IAM policies1.
- Option D: “NumericGreaterThan” : { “aws:MultiFactorAuthAge” : “7200” } is the opposite of option C. This condition will allow access only if the time since the principal authenticated with MFA is more than 7200 seconds (2 hours), which is not the desired requirement. This condition key is supported by all AWS services that support IAM policies1.
- Option E: “NumericLessThan” : { “MaxSessionDuration” : “7200” } is not a valid condition key.

MaxSessionDuration is a property of an IAM role, not a condition key. It specifies the maximum session duration (in seconds) for the role, which can be between 3600 and 43200 seconds (1 to 12 hours). This property can be set when creating or modifying a role, but it cannot be used as a condition in a policy2.

NEW QUESTION 135

A security team is working on a solution that will use Amazon EventBridge (Amazon CloudWatch Events) to monitor new Amazon S3 objects. The solution will monitor for public access and for changes to any S3 bucket policy or setting that result in public access. The security team configures EventBridge to watch for specific API calls that are logged from AWS CloudTrail. EventBridge has an action to send an email notification through Amazon Simple Notification Service (Amazon SNS) to the security team immediately with details of the API call.

Specifically, the security team wants EventBridge to watch for the s3:PutObjectAcl, s3:DeleteBucketPolicy, and s3:PutBucketPolicy API invocation logs from CloudTrail. While developing the solution in a single account, the security team discovers that the s3:PutObjectAcl API call does not invoke an EventBridge event. However, the s3:DeleteBucketPolicy API call and the s3:PutBucketPolicy API call do invoke an event.

The security team has enabled CloudTrail for AWS management events with a basic configuration in the AWS Region in which EventBridge is being tested. Verification of the EventBridge event pattern indicates that the pattern is set up correctly. The security team must implement a solution so that the s3:PutObjectAcl API call will invoke an EventBridge event. The solution must not generate false notifications.

Which solution will meet these requirements?

A. Modify the EventBridge event pattern by selecting Amazon S3. Select All Events as the event type.
B. Modify the EventBridge event pattern by selecting Amazon S3. Select Bucket Level Operations as the event type.
C. Enable CloudTrail Insights to identify unusual API activity.
D. Enable CloudTrail to monitor data events for read and write operations to S3 buckets.

Answer: D

Explanation:

The correct answer is D. Enable CloudTrail to monitor data events for read and write operations to S3 buckets. According to the AWS documentation1, CloudTrail data events are the resource operations performed on or within a resource. These are also known as data plane operations. Data events are often high-volume activities. For example, Amazon S3 object-level API activity (such as GetObject, DeleteObject, and PutObject) is a data event.

By default, trails do not log data events. To record CloudTrail data events, you must explicitly add the supported resources or resource types for which you want to collect activity. For more information, see Logging data events in the Amazon S3 User Guide2.

In this case, the security team wants EventBridge to watch for the s3:PutObjectAcl API invocation logs from CloudTrail. This API uses the acl subresource to set the access control list (ACL) permissions for a new or existing object in an S3 bucket3. This is a data event that affects the S3 object resource type. Therefore, the security team must enable CloudTrail to monitor data events for read and write operations to S3 buckets in order to invoke an EventBridge event for this API call.

The other options are incorrect because:

- A. Modifying the EventBridge event pattern by selecting Amazon S3 and All Events as the event type will not capture the s3:PutObjectAcl API call, because this is a data event and not a management event. Management events provide information about management operations that are performed on resources in your AWS account. These are also known as control plane operations4.
- B. Modifying the EventBridge event pattern by selecting Amazon S3 and Bucket Level Operations as the event type will not capture the s3:PutObjectAcl API call, because this is a data event that affects the S3 object resource type and not the S3 bucket resource type. Bucket level operations are management events that affect the configuration or metadata of an S3 bucket5.
- C. Enabling CloudTrail Insights to identify unusual API activity will not help the security team monitor new S3 objects or changes to any S3 bucket policy or setting that result in public access. CloudTrail Insights helps AWS users identify and respond to unusual activity associated with API calls and API error rates by continuously analyzing CloudTrail management events6. It does not analyze data events or generate EventBridge events.

References:

1: CloudTrail log event reference - AWS CloudTrail 2: Logging data events - AWS CloudTrail 3: PutObjectAcl - Amazon Simple Storage Service 4: [Logging management events - AWS CloudTrail] 5: [Amazon S3 Event Types - Amazon Simple Storage Service] 6: Logging Insights events for trails - AWS CloudTrail

NEW QUESTION 138

A company is implementing a new application in a new IAM account. A VPC and subnets have been created for the application. The application has been peered to an existing VPC in another account in the same IAM Region for database access. Amazon EC2 instances will regularly be created and terminated in the application VPC, but only some of them will need access to the databases in the peered VPC over TCP port 1521. A security engineer must ensure that only the EC2 instances that need access to the databases can access them through the network.

How can the security engineer implement this solution?

A. Create a new security group in the database VPC and create an inbound rule that allows all traffic from the IP address range of the application VP
B. Add a new network ACL rule on the database subnet
C. Configure the rule to TCP port 1521 from the IP address range of the application VP
D. Attach the new security group to the database instances that the application instances need to access.
E. Create a new security group in the application VPC with an inbound rule that allows the IP address range of the database VPC over TCP port 1521. Create a new security group in the database VPC with an inbound rule that allows the IP address range of the application VPC over port 1521. Attach the new security group to the database instances and the application instances that need database access.
F. Create a new security group in the application VPC with no inbound rule
G. Create a new security group in the database VPC with an inbound rule that allows TCP port 1521 from the new application security group in the application VP
H. Attach the application security group to the application instances that need database access, and attach the database security group to the database instances.
I. Create a new security group in the application VPC with an inbound rule that allows the IP address range of the database VPC over TCP port 1521. Add a new network ACL rule on the database subnet
J. Configure the rule to allow all traffic from the IP address range of the application VP
K. Attach the new security group to the application instances that need database access.

Answer: C

NEW QUESTION 141

A company has a single AWS account and uses an Amazon EC2 instance to test application code. The company recently discovered that the instance was compromised. The instance was serving up malware. The analysis of the instance showed that the instance was compromised 35 days ago.
A security engineer must implement a continuous monitoring solution that automatically notifies the company's security team about compromised instances through an email distribution list for high severity findings. The security engineer must implement the solution as soon as possible.
Which combination of steps should the security engineer take to meet these requirements? (Choose three.)

A. Enable AWS Security Hub in the AWS account.
B. Enable Amazon GuardDuty in the AWS account.
C. Create an Amazon Simple Notification Service (Amazon SNS) topi
D. Subscribe the security team's email distribution list to the topic.
E. Create an Amazon Simple Queue Service (Amazon SQS) queu
F. Subscribe the security team's email distribution list to the queue.
G. Create an Amazon EventBridge (Amazon CloudWatch Events) rule for GuardDuty findings of high severit
H. Configure the rule to publish a message to the topic.
I. Create an Amazon EventBridge (Amazon CloudWatch Events) rule for Security Hub findings of high severit
J. Configure the rule to publish a message to the queue.

Answer: BCE

NEW QUESTION 146
A company deployed Amazon GuardDuty In the us-east-1 Region. The company wants all DNS logs that relate to the company's Amazon EC2 instances to be inspected. What should a security engineer do to ensure that the EC2 instances are logged?

A. Use IPv6 addresses that are configured for hostnames.
B. Configure external DNS resolvers as internal resolvers that are visible only to IAM.
C. Use IAM DNS resolvers for all EC2 instances.
D. Configure a third-party DNS resolver with logging for all EC2 instances.

Answer: C

Explanation:
To ensure that the EC2 instances are logged, the security engineer should do the following:
- Use AWS DNS resolvers for all EC2 instances. This allows the security engineer to use
Amazon-provided DNS servers that resolve public DNS hostnames to private IP addresses within their VPC, and that log DNS queries in Amazon CloudWatch Logs.

NEW QUESTION 148
Your CTO thinks your IAM account was hacked. What is the only way to know for certain if there was unauthorized access and what they did, assuming your hackers are very sophisticated IAM engineers and doing everything they can to cover their tracks?
Please select:

A. Use CloudTrail Log File Integrity Validation.
B. Use IAM Config SNS Subscriptions and process events in real time.
C. Use CloudTrail backed up to IAM S3 and Glacier.
D. Use IAM Config Timeline forensics.

Answer: A

Explanation:
The IAM Documentation mentions the following
To determine whether a log file was modified, deleted, or unchanged after CloudTrail delivered it you can use CloudTrail log file integrity validation. This feature is built using industry standard algorithms: SHA-256 for hashing and SHA-256 with RSA for digital signing. This makes it computationally infeasible to modify, delete or forge CloudTrail log files without detection. You can use the IAM CLI to validate the files in the location where CloudTrail delivered them
Validated log files are invaluable in security and forensic investigations. For example, a validated log file enables you to assert positively that the log file itself has not changed, or that particular user credentials performed specific API activity. The CloudTrail log file integrity validation process also lets you know if a log file has been deleted or changed, or assert positively that no log files were delivered to your account during a given period of time.
Options B.C and D is invalid because you need to check for log File Integrity Validation for cloudtrail logs For more information on Cloudtrail log file validation, please visit the below URL: http://docs.IAM.amazon.com/IAMcloudtrail/latest/userguide/cloudtrail-log-file-validation-intro.html
The correct answer is: Use CloudTrail Log File Integrity Validation. omit your Feedback/Queries to our Expert

NEW QUESTION 152
A company uses an external identity provider to allow federation into different IAM accounts. A security engineer for the company needs to identify the federated user that terminated a production Amazon EC2 instance a week ago.
What is the FASTEST way for the security engineer to identify the federated user?

A. Review the IAM CloudTrail event history logs in an Amazon S3 bucket and look for the TerminateInstances event to identify the federated user from the role session name.
B. Filter the IAM CloudTrail event history for the TerminateInstances event and identify the assumed IAM rol
C. Review the AssumeRoleWithSAML event call in CloudTrail to identify the corresponding username.
D. Search the IAM CloudTrail logs for the TerminateInstances event and note the event tim
E. Review the IAM Access Advisor tab for all federated role
F. The last accessed time should match the time when the instance was terminated.
G. Use Amazon Athena to run a SQL query on the IAM CloudTrail logs stored in an Amazon S3 bucket and filter on the TerminateInstances even
H. Identify the corresponding role and run another query to filter the AssumeRoleWithWebIdentity event for the user name.

Answer: B

Explanation:
The fastest way to identify the federated user who terminated a production Amazon EC2 instance is to filter the IAM CloudTrail event history for the

TerminateInstances event and identify the assumed IAM role. Then, review the AssumeRoleWithSAML event call in CloudTrail to identify the corresponding username. This method does not require any additional tools or queries, and it directly links the IAM role with the federated user.
Option A is incorrect because the role session name may not be the same as the federated user name, and it may not be unique or descriptive enough to identify the user.
Option C is incorrect because the IAM Access Advisor tab only shows when a role was last accessed, not by whom or for what purpose. It also does not show the specific time of access, only the date.
Option D is incorrect because using Amazon Athena to run SQL queries on the IAM CloudTrail logs is not the fastest way to identify the federated user, as it requires creating a table schema and running multiple queries. It also assumes that the federation is done using web identity providers, not SAML providers, as indicated by the AssumeRoleWithWebIdentity event.
References:

- AWS Identity and Access Management
- Logging AWS STS API Calls with AWS CloudTrail
- [Using Amazon Athena to Query S3 Data for CloudTrail Analysis]

NEW QUESTION 157
A startup company is using a single AWS account that has resources in a single AWS Region. A security engineer configures an AWS Cloud Trail trail in the same Region to deliver log files to an Amazon S3 bucket by using the AWS CLI.
Because of expansion, the company adds resources in multiple Regions. The secu-rity engineer notices that the logs from the new Regions are not reaching the S3 bucket.
What should the security engineer do to fix this issue with the LEAST amount of operational overhead?

A. Create a new CloudTrail trai
B. Select the new Regions where the company added resources.
C. Change the S3 bucket to receive notifications to track all actions from all Regions.
D. Create a new CloudTrail trail that applies to all Regions.
E. Change the existing CloudTrail trail so that it applies to all Regions.

Answer: D

Explanation:
The correct answer is D. Change the existing CloudTrail trail so that it applies to all Regions.
According to the AWS documentation1, you can configure CloudTrail to deliver log files from multiple Regions to a single S3 bucket for a single account. To change an existing single-Region trail to log in all Regions, you must use the AWS CLI and add the --is-multi-region-trail option to the update-trail command2. This will ensure that you log global service events and capture all management event activity in your account.
Option A is incorrect because creating a new CloudTrail trail for each Region will incur additional costs and increase operational overhead. Option B is incorrect because changing the S3 bucket to receive notifications will not affect the delivery of log files from other Regions. Option C is incorrect because creating a new CloudTrail trail that applies to all Regions will result in duplicate log files for the original Region and also incur additional costs.

NEW QUESTION 160
A security engineer must use AWS Key Management Service (AWS KMS) to design a key management solution for a set of Amazon Elastic Block Store (Amazon EBS) volumes that contain sensitive data. The solution needs to ensure that the key material automatically expires in 90 days.
Which solution meets these criteria?

A. A customer managed CMK that uses customer provided key material
B. A customer managed CMK that uses AWS provided key material
C. An AWS managed CMK
D. Operation system-native encryption that uses GnuPG

Answer: A

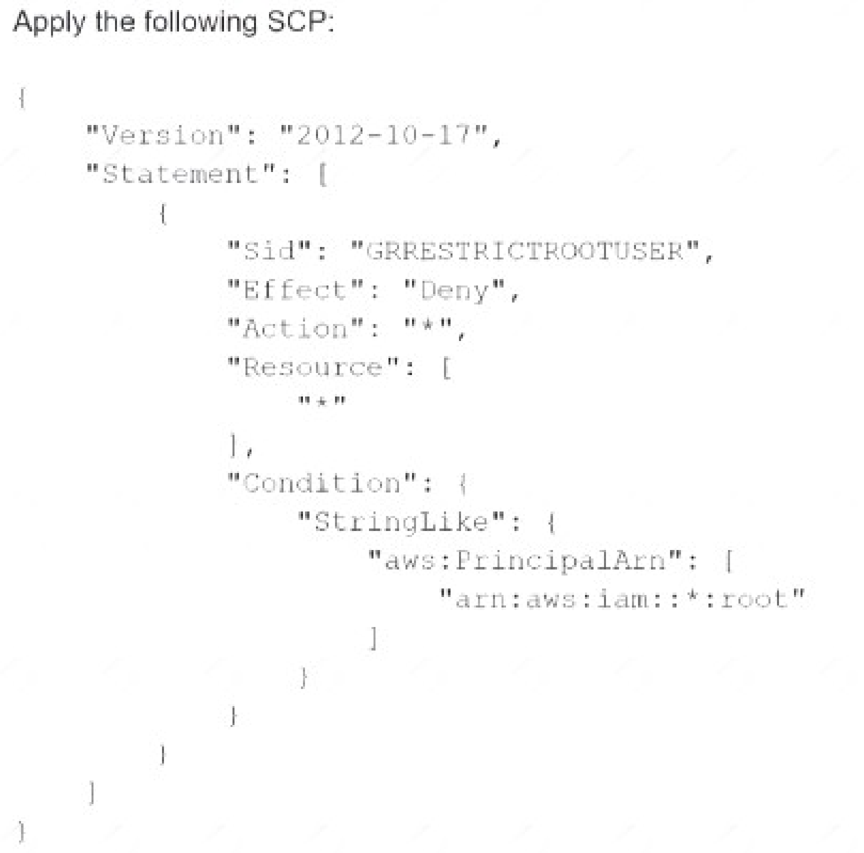
Explanation:
https://awscli.amazonaws.com/v2/documentation/api/latest/reference/kms/import-key-material.html aws kms import-key-material \
--key-id 1234abcd-12ab-34cd-56ef-1234567890ab \
--encrypted-key-material fileb://EncryptedKeyMaterial.bin \
--import-token fileb://ImportToken.bin \
--expiration-model KEY_MATERIAL_EXPIRES \
--valid-to 2021-09-21T19:00:00Z
The correct answer is A. A customer managed CMK that uses customer provided key material.
A customer managed CMK is a KMS key that you create, own, and manage in your AWS account. You have full control over the key configuration, permissions, rotation, and deletion. You can use a customer managed CMK to encrypt and decrypt data in AWS services that are integrated with AWS KMS, such as Amazon EBS1.
A customer managed CMK can use either AWS provided key material or customer provided key material. AWS provided key material is generated by AWS KMS and never leaves the service unencrypted. Customer provided key material is generated outside of AWS KMS and imported into a customer managed CMK. You can specify an expiration date for the imported key material, after which the CMK becomes unusable until you reimport new key material2.
To meet the criteria of automatically expiring the key material in 90 days, you need to use customer provided key material and set the expiration date accordingly. This way, you can ensure that the data encrypted with the CMK will not be accessible after 90 days unless you reimport new key material and re-encrypt the data.
The other options are incorrect for the following reasons:
* B. A customer managed CMK that uses AWS provided key material does not expire automatically. You can enable automatic rotation of the key material every year, but this does not prevent access to the data encrypted with the previous key material. You would need to manually delete the CMK and its backing key material to make the data inaccessible3.
* C. An AWS managed CMK is a KMS key that is created, owned, and managed by an AWS service on your behalf. You have limited control over the key configuration, permissions, rotation, and deletion. You cannot use an AWS managed CMK to encrypt data in other AWS services or applications. You also cannot set an expiration date for the key material of an AWS managed CMK4.
* D. Operation system-native encryption that uses GnuPG is not a solution that uses AWS KMS. GnuPG is a command line tool that implements the OpenPGP standard for encrypting and signing data. It does not integrate with Amazon EBS or other AWS services. It also does not provide a way to automatically expire the key material used for encryption5.
References:
1: Customer Managed Keys - AWS Key Management Service 2: [Importing Key Material in AWS Key Management Service (AWS KMS) - AWS Key Management Service] 3: [Rotating Customer Master Keys - AWS Key Management Service] 4: [AWS Managed Keys - AWS Key Management Service] 5: The GNU Privacy Guard

NEW QUESTION 162

A security engineer is defining the controls required to protect the IAM account root user credentials in an IAM Organizations hierarchy. The controls should also limit the impact in case these credentials have been compromised.

Which combination of controls should the security engineer propose? (Select THREE.)

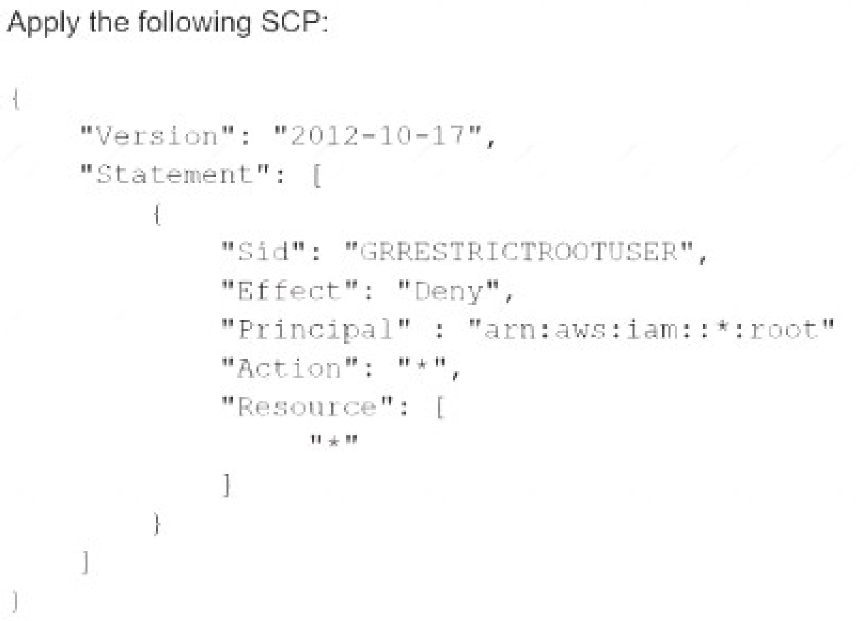
A)



Apply the following SCP:

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "GRRESTRICTROOTUSER",
            "Effect": "Deny",
            "Action": "*",
            "Resource": [
                "*"
            ],
            "Condition": {
                "StringLike": {
                    "aws:PrincipalArn": [
                        "arn:aws:iam::*:root"
                    ]
                }
            }
        }
    ]
}
```

B)



Apply the following SCP:

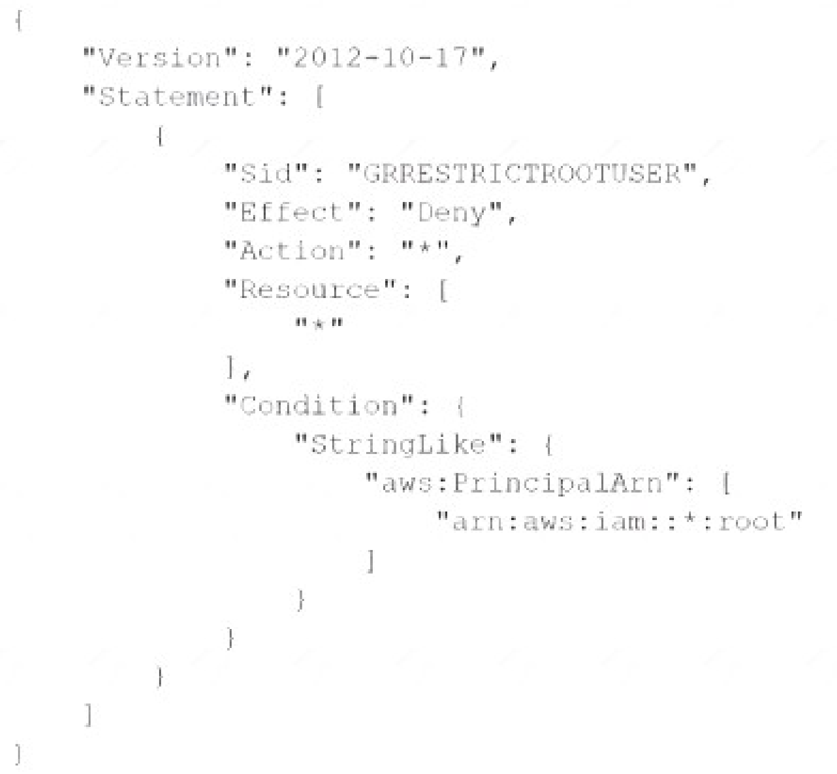
```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "GRRESTRICTROOTUSER",
            "Effect": "Deny",
            "Principal" : "arn:aws:iam::*:root"
            "Action": "*",
            "Resource": [
                "*"
            ]
        }
    ]
}
```

C) Enable multi-factor authentication (MFA) for the root user.

D) Set a strong randomized password and store it in a secure location.

E) Create an access key ID and secret access key, and store them in a secure location.

F) Apply the following permissions boundary to the toot user:



```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "GRRESTRICTROOTUSER",
            "Effect": "Deny",
            "Action": "*",
            "Resource": [
                "*"
            ],
            "Condition": {
                "StringLike": {
                    "aws:PrincipalArn": [
                        "arn:aws:iam::*:root"
                    ]
                }
            }
        }
    ]
}
```

A. Option A
B. Option B
C. Option C

D. Option D
E. Option E
F. Option F

Answer: ACE

NEW QUESTION 165
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