

## Exam Questions SCS-C02

AWS Certified Security - Specialty

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### NEW QUESTION 1

A security engineer needs to develop a process to investigate and respond to potential security events on a company's Amazon EC2 instances. All the EC2 instances 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 security 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 incident 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 captured as part of the process. Which combination of steps should the security engineer take to meet these requirements with the LEAST operational overhead? (Select THREE.)

- A. Gather any relevant metadata for the compromised EC2 instance
- B. Enable termination protection
- C. Isolate the instance by updating the instance's security groups to restrict access
- D. Detach the instance from any Auto Scaling groups that the instance is a member of
- E. Deregister the instance from any Elastic Load Balancing (ELB) resources.
- F. Gather any relevant metadata for the compromised EC2 instance
- G. Enable termination protection
- H. Move the instance to an isolation subnet that denies all source and destination traffic
- I. Associate the instance with the subnet to restrict access
- J. Detach the instance from any Auto Scaling groups that the instance is a member of
- 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 incident ticket information.
- P. Create a Systems Manager State Manager association to generate an EBS volume snapshot of the compromised EC2 instance
- Q. Tag the instance with any relevant metadata and incident ticket information.

**Answer:** ACE

### NEW QUESTION 2

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 3

A company has developed a new Amazon RDS database application. The company must secure the RDS database credentials for encryption in transit and encryption at rest. The company also must rotate the credentials automatically on a regular basis.

Which solution meets these requirements?

- A. Use IAM Systems Manager Parameter Store to store the database credentials
- B. Configure automatic rotation of the credentials.
- C. Use IAM Secrets Manager to store the database credentials
- D. Configure automatic rotation of the credentials
- E. Store the database credentials in an Amazon S3 bucket that is configured with server-side encryption with S3 managed encryption keys (SSE-S3) Rotate the credentials with IAM database authentication.
- F. Store the database credentials in Amazon S3 Glacier, and use S3 Glacier Vault Lock Configure an IAM Lambda function to rotate the credentials on a scheduled basis

**Answer:** A

### NEW QUESTION 4

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 verify?

- 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 servers. Inbound and outbound network ACL configuration on the database subnet. Inbound 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 5**

A company uses a third-party identity provider and SAML-based SSO for its AWS accounts. After the third-party identity provider renewed an expired signing certificate, users saw the following message when trying to log in:

Error: Response Signature Invalid (Service: AWSSecurityTokenService; Status Code: 400; Error Code: InvalidIdentityToken)

A security engineer needs to provide a solution that corrects the error and minimizes operational overhead.

Which solution meets these requirements?

- A. Upload the third-party signing certificate's new private key to the AWS identity provider entity defined in AWS Identity and Access Management (IAM) by using the AWS Management Console.
- B. Sign the identity provider's metadata file with the new public key.
- C. Upload the signature to the AWS identity provider entity defined in AWS Identity and Access Management (IAM) by using the AWS CLI.
- D. Download the updated SAML metadata file from the identity service provider.
- E. Update the file in the AWS identity provider entity defined in AWS Identity and Access Management (IAM) by using the AWS CLI.
- F. Configure the AWS identity provider entity defined in AWS Identity and Access Management (IAM) to synchronously fetch the new public key by using the AWS Management Console.

**Answer:** C

**Explanation:**

This answer is correct because downloading the updated SAML metadata file from the identity service provider ensures that AWS has the latest information about the identity provider, including the new public key. Updating the file in the AWS identity provider entity defined in IAM by using the AWS CLI allows AWS to verify the signature of the SAML assertions sent by the identity provider. This solution also minimizes operational overhead because it can be automated with a script or a cron job.

**NEW QUESTION 6**

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 reportbucket. 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 7**

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 8**

A corporation is preparing to acquire several companies. A Security Engineer must design a solution to ensure that newly acquired IAM accounts follow the corporation's security best practices. The solution should monitor each Amazon S3 bucket for unrestricted public write access and use IAM managed services. What should the Security Engineer do to meet these requirements?

- A. Configure Amazon Macie to continuously check the configuration of all S3 buckets.
- B. Enable IAM Config to check the configuration of each S3 bucket.
- C. Set up IAM Systems Manager to monitor S3 bucket policies for public write access.
- D. Configure an Amazon EC2 instance to have an IAM role and a cron job that checks the status of all S3 buckets.

**Answer: C**

**Explanation:**

because this is a solution that can monitor each S3 bucket for unrestricted public write access and use IAM managed services. S3 is a service that provides object storage in the cloud. Systems Manager is a service that helps you automate and manage your AWS resources. You can use Systems Manager to monitor S3 bucket policies for public write access by using a State Manager association that runs a predefined document called AWS-FindS3BucketWithPublicWriteAccess. This document checks each S3 bucket in an account and reports any bucket that has public write access enabled. The other options are either not suitable or not feasible for meeting the requirements.

**NEW QUESTION 9**

A company uses SAML federation to grant users access to AWS accounts. A company workload that is in an isolated AWS account runs on immutable infrastructure with no human access to Amazon EC2. The company requires a specialized user known as a break glass user to have access to the workload AWS

account and instances in the case of SAML errors. A recent audit discovered that the company did not create the break glass user for the AWS account that contains the workload.

The company must create the break glass user. The company must log any activities of the break glass user and send the logs to a security team. Which combination of solutions will meet these requirements? (Select TWO.)

- A. Create a local individual break glass IAM user for the security tea
- B. Create a trail in AWS CloudTrail that has Amazon CloudWatch Logs turned o
- C. Use Amazon EventBridge to monitor local user activities.
- D. Create a break glass EC2 key pair for the AWS accoun
- E. Provide the key pair to the security tea
- F. Use AWS CloudTrail to monitor key pair activit
- G. Send notifications to the security team by using Amazon Simple Notification Service (Amazon SNS).
- H. Create a break glass IAM role for the accoun
- I. Allow security team members to perform the AssumeRoleWithSAML operatio
- J. Create an AWS Cloud Trail trail that has Amazon CloudWatch Logs turned o
- K. Use Amazon EventBridge to monitor security team activities.
- L. Create a local individual break glass IAM user on the operating system level of each workload instance. Configure unrestricted security groups on the instances to grant access to the break glass IAM users.
- M. Configure AWS Systems Manager Session Manager for Amazon EC2. Configure an AWS Cloud Trail filter based on Session Manage
- N. Send the results to an Amazon Simple Notification Service (Amazon SNS) topic.

**Answer:** AE

**Explanation:**

The combination of solutions that will meet the requirements are:

- A. Create a local individual break glass IAM user for the security team. Create a trail in AWS CloudTrail that has Amazon CloudWatch Logs turned on. Use Amazon EventBridge to monitor local user activities. This is a valid solution because it allows the security team to access the workload AWS account and instances using a local IAM user that does not depend on SAML federation. It also enables logging and monitoring of the break glass user activities using AWS CloudTrail, Amazon CloudWatch Logs, and Amazon EventBridge123.
- E. Configure AWS Systems Manager Session Manager for Amazon EC2. Configure an AWS CloudTrail filter based on Session Manager. Send the results to an Amazon Simple Notification Service (Amazon SNS) topic. This is a valid solution because it allows the security team to access the workload instances without opening any inbound ports or managing SSH keys or bastion hosts. It also enables logging and notification of the break glass user activities using AWS CloudTrail, Session Manager, and Amazon SNS456.

The other options are incorrect because:

- B. Creating a break glass EC2 key pair for the AWS account and providing it to the security team is not a valid solution, because it requires opening inbound ports on the instances and managing SSH keys, which increases the security risk and complexity7.
- C. Creating a break glass IAM role for the account and allowing security team members to perform the AssumeRoleWithSAML operation is not a valid solution, because it still depends on SAML federation, which might not work in case of SAML errors8.
- D. Creating a local individual break glass IAM user on the operating system level of each workload instance and configuring unrestricted security groups on the instances to grant access to the break glass IAM users is not a valid solution, because it requires opening inbound ports on the instances and managing multiple local users, which increases the security risk and complexity9.

References:

1: Creating an IAM User in Your AWS Account 2: Creating a Trail - AWS CloudTrail 3: Using Amazon EventBridge with AWS CloudTrail 4: Setting up Session Manager - AWS Systems Manager 5: Logging Session Manager sessions - AWS Systems Manager 6: Amazon Simple Notification Service 7: Connecting to your Linux instance using SSH - Amazon Elastic Compute Cloud 8: AssumeRoleWithSAML - AWS Security Token Service 9: IAM Users - AWS Identity and Access Management

**NEW QUESTION 10**

A company is designing a multi-account structure for its development teams. The company is using AWS Organizations and AWS Single Sign-On (AWS SSO). The company must implement a solution so that the development teams can use only specific AWS Regions and so that each AWS account allows access to only specific AWS services.

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

- A. Use AWS SSO to set up service-linked roles with IAM policy statements that include the Condition, Resource, and NotAction elements to allow access to only the Regions and services that are needed.
- B. Deactivate AWS Security Token Service (AWS STS) in Regions that the developers are not allowed to use.
- C. Create SCPs that include the Condition, Resource, and NotAction elements to allow access to only the Regions and services that are needed.
- D. For each AWS account, create tailored identity-based policies for AWS SS
- E. Use statements that include the Condition, Resource, and NotAction elements to allow access to only the Regions and services that are needed.

**Answer:** C

**Explanation:**

[https://docs.aws.amazon.com/organizations/latest/userguide/orgs\\_manage\\_policies\\_scps\\_syntax.html#scp-eleme](https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scps_syntax.html#scp-eleme)

**NEW QUESTION 10**

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 destination.
- 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 11**

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 DynamoDB
- B. Create an SCP that denies the creation of S3 buckets and DynamoDB tables that are not encrypted with the key.
- C. Create an IAM policy that denies the kms:Decrypt action for the key
- D. Create a Lambda function that 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 EKS
- 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 EKS
- I. Create an AWS Config rule to send alerts for resources that are not encrypted with the key.

**Answer:** B

**NEW QUESTION 15**

A company uses AWS Organizations to manage a multi-account AWS 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 administrator 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 organization. The solution must turn on AWS Config automatically during account creation.

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

- A. Create an AWS CloudFormation template that contains the 10 required AWS Config rules
- 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 rules
- D. Deploy the conformance pack from the security-01 account.
- E. Create a conformance pack that contains the 10 required AWS Config rules
- F. Deploy the conformance pack from the management-01 account.
- G. Create an AWS CloudFormation template that will activate AWS Config
- H. Deploy the template by using CloudFormation StackSets in the security-01 account.
- I. Create an AWS CloudFormation template that will activate AWS Config
- J. Deploy the template by using CloudFormation StackSets in the management-01 account.

**Answer:** BE

**NEW QUESTION 19**

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 policies
- 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 Manager
- E. Run an assessment for all AWS Regions for all accounts.
- F. Ensure that Amazon Inspector agents are installed on all Amazon EC2 instances in all accounts.

**Answer:** A

**NEW QUESTION 22**

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 instances. Now the company wants to replace some of the 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 group
- B. Configure the load balancers to send logs to the log group
- C. Use the CloudWatch Logs console to search the log
- D. Create CloudWatch Logs filters on the logs for the required metrics.
- E. Create an Amazon S3 bucket
- F. Configure the load balancers to send logs to the S3 bucket

- G. Use Amazon Athena to search the logs that are in the S3 bucket
- H. Create Amazon CloudWatch filters on the S3 log files for the required metrics.
- I. Create an Amazon S3 bucket
- J. Configure the load balancers to send logs to the S3 bucket
- K. Use Amazon Athena to search the logs that are in the S3 bucket
- L. Create Athena queries for the required metric
- M. Publish the metrics to Amazon CloudWatch.
- N. Create an Amazon CloudWatch Logs log group
- O. Configure the load balancers to send logs to the log group
- 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 web<sup>1</sup>
- > 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 applications<sup>2</sup>
- > 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 issues<sup>3</sup>
- > 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 25**

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:

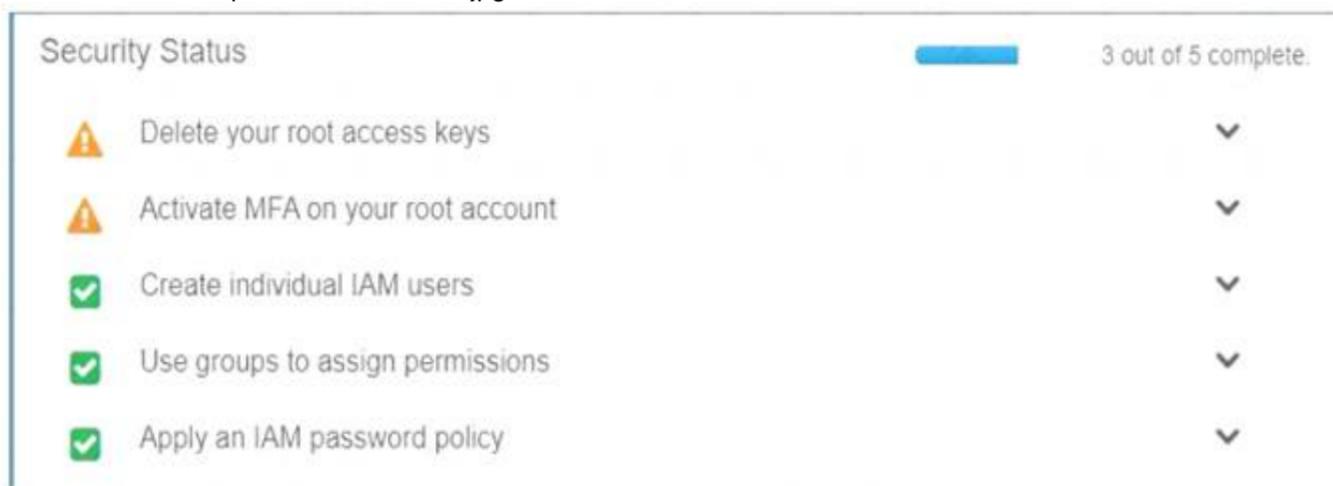
- A. Use short but complex password on the root account and any administrators.
- B. Use IAM Geo-Lock and disallow anyone from logging in except for in your city.
- C. Use MFA on all users and accounts, especially on the root account.
- D. Don't write down or remember the root account password after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



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/credentials mfa.html>

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 28**

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 29**

A Network Load Balancer (NLB) target instance is not entering the InService state. A security engineer determines that health checks are failing. Which factors could cause the health check failures? (Select THREE.)

- A. The target instance's security group does not allow traffic from the NLB.
- B. The target instance's security group is not attached to the NLB.
- C. The NLB's security group is not attached to the target instance.
- D. The target instance's subnet network ACL does not allow traffic from the NLB.
- E. The target instance's security group is not using IP addresses to allow traffic from the NLB.
- F. The target network ACL is not attached to the NLB.

**Answer:** ACD

**NEW QUESTION 33**

To meet regulatory requirements, a Security Engineer needs to implement an IAM policy that restricts the use of AWS services to the us-east-1 Region. What policy should the Engineer implement?

- A.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "*",
      "Resource": "*",
      "Condition": {
        "StringEquals": {
          "aws:RequestedRegion": "us-east-1"
        }
      }
    }
  ]
}
```

B. A computer code with black text Description automatically generated

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "*",
      "Resource": "*",
      "Condition": {
        "StringEquals": {
          "ec2:Region": "us-east-1"
        }
      }
    }
  ]
}
```

C. A computer code with black text Description automatically generated

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Deny",
      "Action": "*",
      "Resource": "*",
      "Condition": {
        "StringNotEquals": {
          "aws:RequestedRegion": "us-east-1"
        }
      }
    }
  ]
}
```

D. A computer code with text Description automatically generated

```

{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Deny",
      "NotAction": "*",
      "Resource": "*",
      "Condition": {
        "StringEquals": {
          "aws:RequestedRegion": "us-east-1"
        }
      }
    }
  ]
}

```

**Answer:** C

**Explanation:**

[https://docs.aws.amazon.com/IAM/latest/UserGuide/reference\\_policies\\_examples\\_aws\\_deny-requested-region.h](https://docs.aws.amazon.com/IAM/latest/UserGuide/reference_policies_examples_aws_deny-requested-region.h)

**NEW QUESTION 36**

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) topic.
- D. Subscribe the security team's email distribution list to the topic.
- E. Create an Amazon Simple Queue Service (Amazon SQS) queue.
- 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 severity.
- 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 severity.
- J. Configure the rule to publish a message to the queue.

**Answer:** BCE

**NEW QUESTION 37**

A company is planning to use Amazon Elastic File System (Amazon EFS) with its on-premises servers. The company has an existing IAM Direct Connect connection established between its on-premises data center and an IAM Region. A security policy states that the company's on-premises firewall should only have specific IP addresses added to the allow list and not a CIDR range. The company also wants to restrict access so that only certain data center-based servers have access to Amazon EFS.

How should a security engineer implement this solution?

- A. Add the file-system-id-efs IAM-region amazonIAM.com URL to the allow list for the data center firewall. Install the IAM CLI on the data center-based servers to mount the EFS file system in the EFS security group. Add the data center IP range to the allow list. Mount the EFS using the EFS file system name.
- B. Assign an Elastic IP address to Amazon EFS and add the Elastic IP address to the allow list for the data center firewall. Install the IAM CLI on the data center-based servers to mount the EFS file system. In the EFS security group, add the IP addresses of the data center servers to the allow list. Mount the EFS using the Elastic IP address.
- C. Add the EFS file system mount target IP addresses to the allow list for the data center firewall. In the EFS security group, add the data center server IP addresses to the allow list. Use the Linux terminal to mount the EFS file system using the IP address of one of the mount targets.
- D. Assign a static range of IP addresses for the EFS file system by contacting IAM Support. In the EFS security group, add the data center server IP addresses to the allow list. Use the Linux terminal to mount the EFS file system using one of the static IP addresses.

**Answer:** B

**Explanation:**

To implement the solution, the security engineer should do the following:

- Assign an Elastic IP address to Amazon EFS and add the Elastic IP address to the allow list for the data center firewall. This allows the security engineer to use a specific IP address for the EFS file system that can be added to the firewall rules, instead of a CIDR range or a URL.
- Install the AWS CLI on the data center-based servers to mount the EFS file system. This allows the security engineer to use the mount helper provided by AWS CLI to mount the EFS file system with encryption in transit.
- In the EFS security group, add the IP addresses of the data center servers to the allow list. This allows the security engineer to restrict access to the EFS file system to only certain data center-based servers.
- Mount the EFS using the Elastic IP address. This allows the security engineer to use the Elastic IP address as the DNS name for mounting the EFS file system.

**NEW QUESTION 38**

A company has recently recovered from a security incident that required the restoration of Amazon EC2 instances from snapshots. After performing a gap analysis of its disaster recovery procedures and backup strategies, the company is concerned that, next time, it will not be able to recover the EC2 instances if the AWS account was compromised and Amazon EBS snapshots were deleted. All EBS snapshots are encrypted using an AWS KMS CMK. Which solution would solve this problem?

- A. Create a new Amazon S3 bucket
- B. Use EBS lifecycle policies to move EBS snapshots to the new S3 bucket
- C. Move snapshots to Amazon S3 Glacier using lifecycle policies, and apply Glacier Vault Lock policies to prevent deletion.
- D. Use AWS Systems Manager to distribute a configuration that performs local backups of all attached disks to Amazon S3.
- E. Create a new AWS account with limited privilege
- F. Allow the new account to access the AWS KMS key used to encrypt the EBS snapshots, and copy the encrypted snapshots to the new account on a recurring basis.
- G. Use AWS Backup to copy EBS snapshots to Amazon S3.

**Answer:** C

**Explanation:**

This answer is correct because creating a new AWS account with limited privileges would provide an isolated and secure backup destination for the EBS snapshots. Allowing the new account to access the AWS KMS key used to encrypt the EBS snapshots would enable cross-account snapshot sharing without requiring re-encryption. Copying the encrypted snapshots to the new account on a recurring basis would ensure that the backups are up-to-date and consistent.

**NEW QUESTION 43**

A company has multiple departments. Each department has its own IAM account. All these accounts belong to the same organization in IAM Organizations. A large .csv file is stored in an Amazon S3 bucket in the sales department's IAM account. The company wants to allow users from the other accounts to access the .csv file's content through the combination of IAM Glue and Amazon Athena. However, the company does not want to allow users from the other accounts to access other files in the same folder. Which solution will meet these requirements?

- A. Apply a user policy in the other accounts to allow IAM Glue and Athena to access the .csv file.
- B. Use S3 Select to restrict access to the .csv file
- C. In IAM Glue Data Catalog, use S3 Select as the source of the IAM Glue database.
- D. Define an IAM Glue Data Catalog resource policy in IAM Glue to grant cross-account S3 object access to the .csv file.
- E. Grant IAM Glue access to Amazon S3 in a resource-based policy that specifies the organization as the principal.

**Answer:** A

**NEW QUESTION 45**

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 48**

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 security 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 trail
- 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 documentation<sup>1</sup>, 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` command<sup>2</sup>. 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 52

A Security Engineer is building a Java application that is running on Amazon EC2. The application communicates with an Amazon RDS instance and authenticates with a user name and password.

Which combination of steps can the Engineer take to protect the credentials and minimize downtime when the credentials are rotated? (Choose two.)

- A. Have a Database Administrator encrypt the credentials and store the ciphertext in Amazon S3. Grant permission to the instance role associated with the EC2 instance to read the object and decrypt the ciphertext.
- B. Configure a scheduled job that updates the credential in AWS Systems Manager Parameter Store and notifies the Engineer that the application needs to be restarted.
- C. Configure automatic rotation of credentials in AWS Secrets Manager.
- D. Store the credential in an encrypted string parameter in AWS Systems Manager Parameter Store.
- E. Grant permission to the instance role associated with the EC2 instance to access the parameter and the AWS KMS key that is used to encrypt it.
- F. Configure the Java application to catch a connection failure and make a call to AWS Secrets Manager to retrieve updated credentials when the password is rotated.
- G. Grant permission to the instance role associated with the EC2 instance to access Secrets Manager.

**Answer:** CE

#### Explanation:

AWS Secrets Manager is a service that helps you manage, retrieve, and rotate secrets such as database credentials, API keys, and other sensitive information. By configuring automatic rotation of credentials in AWS Secrets Manager, you can ensure that your secrets are changed regularly and securely, without requiring manual intervention or application downtime. You can also specify the rotation frequency and the rotation function that performs the logic of changing the credentials on the database and updating the secret in Secrets Manager<sup>1</sup>.

\* E. Configure the Java application to catch a connection failure and make a call to AWS Secrets Manager to retrieve updated credentials when the password is rotated. Grant permission to the instance role associated with the EC2 instance to access Secrets Manager.

By configuring the Java application to catch a connection failure and make a call to AWS Secrets Manager to retrieve updated credentials, you can avoid hard-coding the credentials in your application code or configuration files. This way, your application can dynamically obtain the latest credentials from Secrets Manager whenever the password is rotated, without needing to restart or redeploy the application. To enable this, you need to grant permission to the instance role associated with the EC2 instance to access Secrets Manager using IAM policies<sup>2</sup>. You can also use the AWS SDK for Java to integrate your application with Secrets Manager<sup>3</sup>.

#### NEW QUESTION 55

A company needs a security engineer to implement a scalable solution for multi-account authentication and authorization. The solution should not introduce additional user-managed architectural components. Native IAM features should be used as much as possible. The security engineer has set up IAM Organizations with all features activated and IAM SSO enabled.

Which additional steps should the security engineer take to complete the task?

- A. Use AD Connector to create users and groups for all employees that require access to IAM accounts. Assign AD Connector groups to IAM accounts and link to the IAM roles in accordance with the employees' job functions and access requirements. Instruct employees to access IAM accounts by using the IAM Directory Service user portal.
- B. Use an IAM SSO default directory to create users and groups for all employees that require access to IAM accounts.
- C. Assign groups to IAM accounts and link to permission sets in accordance with the employees' job functions and access requirements.
- D. Instruct employees to access IAM accounts by using the IAM SSO user portal.
- E. Use an IAM SSO default directory to create users and groups for all employees that require access to IAM accounts.
- F. Link IAM SSO groups to the IAM users present in all accounts to inherit existing permissions.
- G. Instruct employees to access IAM accounts by using the IAM SSO user portal.
- H. Use IAM Directory Service for Microsoft Active Directory to create users and groups for all employees that require access to IAM accounts. Enable IAM Management Console access in the created directory and specify IAM SSO as a source of information for integrated accounts and permission sets.
- I. Instruct employees to access IAM accounts by using the IAM Directory Service user portal.

**Answer:** B

#### NEW QUESTION 56

A company is undergoing a layer 3 and layer 4 DDoS attack on its web servers running on IAM.

Which combination of IAM services and features will provide protection in this scenario? (Select THREE).

- A. Amazon Route 53
- B. IAM Certificate Manager (ACM)
- C. Amazon S3
- D. IAM Shield
- E. Elastic Load Balancer
- F. Amazon GuardDuty

**Answer:** DEF

#### NEW QUESTION 58

A company deploys a distributed web application on a fleet of Amazon EC2 instances. The fleet is behind an Application Load Balancer (ALB) that will be configured to terminate the TLS connection. All TLS traffic to the ALB must stay secure, even if the certificate private key is compromised.

How can a security engineer meet this requirement?

- A. Create an HTTPS listener that uses a certificate that is managed by IAM Certificate Manager (ACM).
- B. Create an HTTPS listener that uses a security policy that uses a cipher suite with perfect forward secrecy (PFS).
- C. Create an HTTPS listener that uses the Server Order Preference security feature.
- D. Create a TCP listener that uses a custom security policy that allows only cipher suites with perfect forward secrecy (PFS).

Answer: A

#### NEW QUESTION 60

A company is using IAM Secrets Manager to store secrets for its production Amazon RDS database. The Security Officer has asked that secrets be rotated every 3 months. Which solution would allow the company to securely rotate the secrets? (Select TWO.)

- A. Place the RDS instance in a public subnet and an IAM Lambda function outside the VPC
- B. Schedule the Lambda function to run every 3 months to rotate the secrets.
- C. Place the RDS instance in a private subnet and an IAM Lambda function inside the VPC in the private subne
- D. Configure the private subnet to use a NAT gatewa
- E. Schedule the Lambda function to run every 3 months to rotate the secrets.
- F. Place the RDS instance in a private subnet and an IAM Lambda function outside the VP
- G. Configure the private subnet to use an internet gatewa
- H. Schedule the Lambda function to run every 3 months lo rotate the secrets.
- I. Place the RDS instance in a private subnet and an IAM Lambda function inside the VPC in the private subne
- J. Schedule the Lambda function to run quarterly to rotate the secrets.
- K. Place the RDS instance in a private subnet and an IAM Lambda function inside the VPC in the private subne
- L. Configure a Secrets Manager interface endpoint
- M. Schedule the Lambda function to run every 3 months to rotate the secrets.

Answer: BE

#### Explanation:

these are the solutions that can securely rotate the secrets for the production RDS database using Secrets Manager. Secrets Manager is a service that helps you manage secrets such as database credentials, API keys, and passwords. You can use Secrets Manager to rotate secrets automatically by using a Lambda function that runs on a schedule. The Lambda function needs to have access to both the RDS instance and the Secrets Manager service. Option B places the RDS instance in a private subnet and the Lambda function in the same VPC in another private subnet. The private subnet with the Lambda function needs to use a NAT gateway to access Secrets Manager over the internet. Option E places the RDS instance and the Lambda function in the same private subnet and configures a Secrets Manager interface endpoint, which is a private connection between the VPC and Secrets Manager. The other options are either insecure or incorrect for rotating secrets using Secrets Manager.

#### NEW QUESTION 61

A security engineer needs to see up an Amazon CloudFront distribution for an Amazon S3 bucket that hosts a static website. The security engineer must allow only specified IP addresses to access the website. The security engineer also must prevent users from accessing the website directly by using S3 URLs. Which solution will meet these requirements?

- A. Generate an S3 bucket polic
- B. Specify cloudfront amazonaws com as the principa
- C. Use the aws SourceIp condition key to allow access only if the request comes from the specified IP addresses.
- D. Create a CloudFront origin access identity (OAI). Create the S3 bucket policy so that only the OAI has acces
- E. Create an AWS WAF web ACL and add an IP set rul
- F. Associate the web ACL with the CloudFront distribution.
- G. Implement security groups to allow only the specified IP addresses access and to restrict S3 bucket access by using the CloudFront distribution.
- H. Create an S3 bucket access point to allow access from only the CloudFront distributio
- I. Create an AWS WAF web ACL and add an IP set rul
- J. Associate the web ACL with the CloudFront distribution.

Answer: B

#### NEW QUESTION 66

The Security Engineer is managing a traditional three-tier web application that is running on Amazon EC2 instances. The application has become the target of increasing numbers of malicious attacks from the Internet.

What steps should the Security Engineer take to check for known vulnerabilities and limit the attack surface? (Choose two.)

- A. Use AWS Certificate Manager to encrypt all traffic between the client and application servers.
- B. Review the application security groups to ensure that only the necessary ports are open.
- C. Use Elastic Load Balancing to offload Secure Sockets Layer encryption.
- D. Use Amazon Inspector to periodically scan the backend instances.
- E. Use AWS Key Management Services to encrypt all the traffic between the client and application servers.

Answer: BD

#### Explanation:

The steps that the Security Engineer should take to check for known vulnerabilities and limit the attack surface are:

- B. Review the application security groups to ensure that only the necessary ports are open. This is a good practice to reduce the exposure of the EC2 instances to potential attacks from the Internet. Application security groups are a feature of Azure that allow you to group virtual machines and define network security policies based on those groups<sup>1</sup>.
- D. Use Amazon Inspector to periodically scan the backend instances. This is a service that helps you to identify vulnerabilities and exposures in your EC2 instances and applications. Amazon Inspector can perform automated security assessments based on predefined or custom rules packages<sup>2</sup>.

#### NEW QUESTION 70

A company needs to follow security best practices to deploy resources from an AWS CloudFormation template. The CloudFormation template must be able to configure sensitive database credentials.

The company already uses AWS Key Management Service (AWS KMS) and AWS Secrets Manager. Which solution will meet the requirements?

- A. Use a dynamic reference in the CloudFormation template to reference the database credentials in Secrets Manager.
- B. Use a parameter in the CloudFormation template to reference the database credential
- C. Encrypt the CloudFormation template by using AWS KMS.

- D. Use a SecureString parameter in the CloudFormation template to reference the database credentials in Secrets Manager.
- E. Use a SecureString parameter in the CloudFormation template to reference an encrypted value in AWS KMS

**Answer:** A

**Explanation:**

➤ Option A: This option meets the requirements of following security best practices and configuring sensitive database credentials in the CloudFormation template. A dynamic reference is a way to specify external values that are stored and managed in other services, such as Secrets Manager, in the stack templates<sup>1</sup>. When using a dynamic reference, CloudFormation retrieves the value of the specified reference when necessary during stack and change set operations<sup>1</sup>. Dynamic references can be used for certain resources that support them, such as AWS::RDS::DBInstance<sup>1</sup>. By using a dynamic reference to reference the database credentials in Secrets Manager, the company can leverage the existing integration between these services and avoid hardcoding the secret information in the template. Secrets Manager is a service that helps you protect secrets needed to access your applications, services, and IT resources<sup>2</sup>. Secrets Manager enables you to rotate, manage, and retrieve database credentials, API keys, and other secrets throughout their lifecycle<sup>2</sup>.

**NEW QUESTION 71**

A company is using AWS Organizations to implement a multi-account strategy. The company does not have on-premises infrastructure. All workloads run on AWS. The company currently has eight member accounts. The company anticipates that it will have no more than 20 AWS accounts total at any time.

The company issues a new security policy that contains the following requirements:

- No AWS account should use a VPC within the AWS account for workloads.
- The company should use a centrally managed VPC that all AWS accounts can access to launch workloads in subnets.
- No AWS account should be able to modify another AWS account's application resources within the centrally managed VPC.
- The centrally managed VPC should reside in an existing AWS account that is named Account-A within an organization.

The company uses an AWS CloudFormation template to create a VPC that contains multiple subnets in Account-A. This template exports the subnet IDs through the CloudFormation Outputs section.

Which solution will complete the security setup to meet these requirements?

- A. Use a CloudFormation template in the member accounts to launch workload
- B. Configure the template to use the Fn::ImportValue function to obtain the subnet ID values.
- C. Use a transit gateway in the VPC within Account-
- D. Configure the member accounts to use the transit gateway to access the subnets in Account-A to launch workloads.
- E. Use AWS Resource Access Manager (AWS RAM) to share Account-A's VPC subnets with the remaining member account
- F. Configure the member accounts to use the shared subnets to launch workloads.
- G. Create a peering connection between Account-A and the remaining member account
- H. Configure the member accounts to use the subnets in Account-A through the VPC peering connection to launch workloads.

**Answer:** C

**Explanation:**

The correct answer is C. Use AWS Resource Access Manager (AWS RAM) to share Account-A's VPC subnets with the remaining member accounts. Configure the member accounts to use the shared subnets to launch workloads.

This answer is correct because AWS RAM is a service that helps you securely share your AWS resources across AWS accounts, within your organization or organizational units (OUs), and with IAM roles and users for supported resource types<sup>1</sup>. One of the supported resource types is VPC subnets<sup>2</sup>, which means you can share the subnets in Account-A's VPC with the other member accounts using AWS RAM. This way, you can meet the requirements of using a centrally managed VPC, avoiding duplicate VPCs in each account, and launching workloads in shared subnets. You can also control the access to the shared subnets by using IAM policies and resource-based policies<sup>3</sup>, which can prevent one account from modifying another account's resources.

The other options are incorrect because:

- A. Using a CloudFormation template in the member accounts to launch workloads and using the Fn::ImportValue function to obtain the subnet ID values is not a solution, because Fn::ImportValue can only import values that have been exported by another stack within the same region<sup>4</sup>. This means that you cannot use Fn::ImportValue to reference the subnet IDs that are exported by Account-A's CloudFormation template, unless all the member accounts are in the same region as Account-A. This option also does not avoid creating duplicate VPCs in each account, which is one of the requirements.
- B. Using a transit gateway in the VPC within Account-A and configuring the member accounts to use the transit gateway to access the subnets in Account-A to launch workloads is not a solution, because a transit gateway does not allow you to launch workloads in another account's subnets. A transit gateway is a network transit hub that enables you to route traffic between your VPCs and on-premises networks<sup>5</sup>, but it does not enable you to share subnets across accounts.
- D. Creating a peering connection between Account-A and the remaining member accounts and configuring the member accounts to use the subnets in Account-A through the VPC peering connection to launch workloads is not a solution, because a VPC peering connection does not allow you to launch workloads in another account's subnets. A VPC peering connection is a networking connection between two VPCs that enables you to route traffic between them privately<sup>6</sup>, but it does not enable you to share subnets across accounts.

References:

1: What is AWS Resource Access Manager? 2: Shareable AWS resources 3: Managing permissions for shared resources 4: Fn::ImportValue 5: What is a transit gateway? 6: What is VPC peering?

**NEW QUESTION 75**

A company uses AWS Organizations. The company wants to implement short-term credentials for third-party AWS accounts to use to access accounts within the company's organization. Access is for the AWS Management Console and third-party software-as-a-service (SaaS) applications. Trust must be enhanced to prevent two external accounts from using the same credentials. The solution must require the least possible operational effort.

Which solution will meet these requirements?

- A. Use a bearer token authentication with OAuth or SAML to manage and share a central Amazon Cognito user pool across multiple Amazon API Gateway APIs.
- B. Implement AWS IAM Identity Center (AWS Single Sign-On), and use an identity source of choice. Grant access to users and groups from other accounts by using permission sets that are assigned by account.
- C. Create a unique IAM role for each external account
- D. Create a trust policy
- E. Use AWS Secrets Manager to create a random external key.
- F. Create a unique IAM role for each external account
- G. Create a trust policy that includes a condition that uses the sts:ExternalId condition key.

**Answer:** D

**Explanation:**

The correct answer is D.

To implement short-term credentials for third-party AWS accounts, you can use IAM roles and trust policies. A trust policy is a JSON policy document that defines who can assume the role. You can specify the AWS account ID of the third-party account as a principal in the trust policy, and use the `sts:ExternalId` condition key to enhance the security of the role. The `sts:ExternalId` condition key is a unique identifier that is agreed upon by both parties and included in the `AssumeRole` request. This way, you can prevent the “confused deputy” problem, where an unauthorized party can use the same role as a legitimate party.

Option A is incorrect because bearer token authentication with OAuth or SAML is not suitable for granting access to AWS accounts and resources. Amazon Cognito and API Gateway are used for building web and mobile applications that require user authentication and authorization.

Option B is incorrect because AWS IAM Identity Center (AWS Single Sign-On) is a service that simplifies the management of access to multiple AWS accounts and cloud applications for your workforce users. It does not support granting access to third-party AWS accounts.

Option C is incorrect because using AWS Secrets Manager to create a random external key is not necessary and adds operational complexity. You can use the `sts:ExternalId` condition key instead to provide a unique identifier for each external account.

#### NEW QUESTION 80

A company is using Amazon Elastic Container Service (Amazon ECS) to deploy an application that deals with sensitive data. During a recent security audit, the company identified a security issue in which Amazon RDS credentials were stored with the application code in the company's source code repository. A security engineer needs to develop a solution to ensure that database credentials are stored securely and rotated periodically. The credentials should be accessible to the application only. The engineer also needs to prevent database administrators from sharing database credentials as plaintext with other teammates. The solution must also minimize administrative overhead.

Which solution meets these requirements?

- A. Use the IAM Systems Manager Parameter Store to generate database credential.
- B. Use an IAM profile for ECS tasks to restrict access to database credentials to specific containers only.
- C. Use IAM Secrets Manager to store database credential.
- D. Use an IAM inline policy for ECS tasks to restrict access to database credentials to specific containers only.
- E. Use the IAM Systems Manager Parameter Store to store database credential.
- F. Use IAM roles for ECS tasks to restrict access to database credentials to specific containers only.
- G. Use IAM Secrets Manager to store database credential.
- H. Use IAM roles for ECS tasks to restrict access to database credentials to specific containers only.

**Answer:** D

#### Explanation:

To ensure that database credentials are stored securely and rotated periodically, the security engineer should do the following:

- Use AWS Secrets Manager to store database credentials. This allows the security engineer to encrypt and manage secrets centrally, and to configure automatic rotation schedules for them.
- Use IAM roles for ECS tasks to restrict access to database credentials to specific containers only. This allows the security engineer to grant fine-grained permissions to ECS tasks based on their roles, and to avoid sharing credentials as plaintext with other teammates.

#### NEW QUESTION 81

There is a requirement for a company to transfer large amounts of data between IAM and an on-premise location. There is an additional requirement for low latency and high consistency traffic to IAM. Given these requirements, how would you design a hybrid architecture? Choose the correct answer from the options below.

Please select:

- A. Provision a Direct Connect connection to an IAM region using a Direct Connect partner.
- B. Create a VPN tunnel for private connectivity, which increases network consistency and reduces latency.
- C. Create an IPsec tunnel for private connectivity, which increases network consistency and reduces latency.
- D. Create a VPC peering connection between IAM and the Customer gateway.

**Answer:** A

#### Explanation:

IAM Direct Connect makes it easy to establish a dedicated network connection from your premises to IAM. Using IAM Direct Connect, you can establish private connectivity between IAM and your datacenter, office, or colocation environment, which in many cases can reduce your network costs, increase bandwidth throughput, and provide a more consistent network experience than Internet-based connections.

Options B and C are invalid because these options will not reduce network latency. Option D is invalid because this is only used to connect 2 VPC's.

For more information on IAM direct connect, just browse to the below URL: <https://IAM.amazon.com/directconnect>

The correct answer is: Provision a Direct Connect connection to an IAM region using a Direct Connect partner. omit your Feedback/Queries to our Experts

#### NEW QUESTION 84

A company is using IAM Organizations to develop a multi-account secure networking strategy. The company plans to use separate centrally managed accounts for shared services, auditing, and security inspection. The company plans to provide dozens of additional accounts to application owners for production and development environments.

Company security policy requires that all internet traffic be routed through a centrally managed security inspection layer in the security inspection account. A security engineer must recommend a solution that minimizes administrative overhead and complexity.

Which solution meets these requirements?

- A. Use IAM Control Tower
- B. Modify the default Account Factory networking template to automatically associate new accounts with a centrally managed VPC through a VPC peering connection and to create a default route to the VPC peer in the default route table
- C. Create an SCP that denies the `CreateInternetGateway` action
- D. Attach the SCP to all accounts except the security inspection account.
- E. Create a centrally managed VPC in the security inspection account
- F. Establish VPC peering connections between the security inspection account and other accounts
- G. Instruct account owners to create default routes in their account route tables that point to the VPC peer
- H. Create an SCP that denies the `AttachInternetGateway` action
- I. Attach the SCP to all accounts except the security inspection account.
- J. Use IAM Control Tower
- K. Modify the default Account Factory networking template to automatically associate new accounts with a centrally managed transit gateway and to create a

- default route to the transit gateway in the default route tabl
- L. Create an SCP that denies the AttachInternetGateway actio
- M. Attach the SCP to all accounts except the security inspection account.
- N. Enable IAM Resource Access Manager (IAM RAM) for IAM Organization
- O. Create a shared transit gateway, and make it available by using an IAM RAM resource shar
- P. Create an SCP that denies the CreateInternetGateway actio
- Q. Attach the SCP to all accounts except the security inspection accoun
- R. Create routes in the route tables of all accounts that point to the shared transit gateway.

**Answer: C**

**NEW QUESTION 89**

A security engineer needs to configure an Amazon S3 bucket policy to restrict access to an S3 bucket that is named DOC-EXAMPLE-BUCKET. The policy must allow access to only DOC-EXAMPLE-BUCKET from only the following endpoint: vpce-1a2b3c4d. The policy must deny all access to DOC-EXAMPLE-BUCKET if the specified endpoint is not used.

Which bucket policy statement meets these requirements?

A. A computer code with black text Description automatically generated

```
"Statement": [
  {
    "Sid": "Access-to-specific-VPCE-only",
    "Principal": "*",
    "Action": "s3:*",
    "Effect": "Allow",
    "Resource": ["arn:aws:s3:::DOC-EXAMPLE-BUCKET",
      "arn:aws:s3:::DOC-EXAMPLE-BUCKET/*"],
    "Condition": {
      "StringNotEquals": {
        "aws:sourceVpce": "vpce-1a2b3c4d"
      }
    }
  }
]
```

B. A computer code with black text Description automatically generated

```
"Statement": [
  {
    "Sid": "Access-to-specific-VPCE-only",
    "Principal": "*",
    "Action": "s3:*",
    "Effect": "Deny",
    "Resource": ["arn:aws:s3:::DOC-EXAMPLE-BUCKET",
      "arn:aws:s3:::DOC-EXAMPLE-BUCKET/*"],
    "Condition": {
      "StringNotEquals": {
        "aws:sourceVpce": "vpce-1a2b3c4d"
      }
    }
  }
]
```

C. A computer code with black text Description automatically generated

```
"Statement": [
  {
    "Sid": "Access-to-specific-VPCE-only",
    "Principal": "*",
    "Action": "s3:*",
    "Effect": "Deny",
    "Resource": ["arn:aws:s3:::DOC-EXAMPLE-BUCKET",
      "arn:aws:s3:::DOC-EXAMPLE-BUCKET/*"],
    "Condition": {
      "StringEquals": {
        "aws:sourceVpce": "vpce-1a2b3c4d"
      }
    }
  }
]
```

D. A computer code with black text Description automatically generated

```

"Statement": [
  {
    "Sid": "Access-to-specific-VPCE-only",
    "Principal": "*",
    "Action": "s3:*",
    "Effect": "Allow",
    "Resource": ["arn:aws:s3::DOC-EXAMPLE-BUCKET",
                 "arn:aws:s3::DOC-EXAMPLE-BUCKET/*"],
    "Condition": {
      "StringEquals": {
        "aws:sourceVpce": "vpce-1a2b3c4d"
      }
    }
  }
]

```

**Answer:** B

**Explanation:**

<https://docs.aws.amazon.com/AmazonS3/latest/userguide/example-bucket-policies-vpc-endpoint.html>

**NEW QUESTION 92**

A company has enabled Amazon GuardDuty in all AWS Regions as part of its security monitoring strategy. In one of its VPCs, the company hosts an Amazon EC2 instance that works as an FTP server. A high number of clients from multiple locations contact the FTP server. GuardDuty identifies this activity as a brute force attack because of the high number of connections that happen every hour.

The company has flagged the finding as a false positive, but GuardDuty continues to raise the issue. A security engineer must improve the signal-to-noise ratio without compromising the company's visibility of potential anomalous behavior.

Which solution will meet these requirements?

- A. Disable the FTP rule in GuardDuty in the Region where the FTP server is deployed.
- B. Add the FTP server to a trusted IP list.
- C. Deploy the list to GuardDuty to stop receiving the notifications.
- D. Create a suppression rule in GuardDuty to filter findings by automatically archiving new findings that match the specified criteria.
- E. Create an AWS Lambda function that has the appropriate permissions to delete the finding whenever a new occurrence is reported.

**Answer:** C

**Explanation:**

"When you create an Amazon GuardDuty filter, you choose specific filter criteria, name the filter and can enable the auto-archiving of findings that the filter matches. This allows you to further tune GuardDuty to your unique environment, without degrading the ability to identify threats. With auto-archive set, all findings are still generated by GuardDuty, so you have a complete and immutable history of all suspicious activity."

**NEW QUESTION 97**

A company is building a data processing application that uses AWS Lambda functions. The application's Lambda functions need to communicate with an Amazon RDS DB 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:**

The AWS documentation states that you can deploy the Lambda functions inside the VPC and attach a security group to the Lambda functions. You can then provide outbound rule access to the VPC CIDR range only and update the DB instance security group to allow traffic from the Lambda security group. This method is the most secure way to meet the requirements.

References: : AWS Lambda Developer Guide

**NEW QUESTION 102**

A company needs a forensic-logging solution for hundreds of applications running in Docker on Amazon EC2. The solution must perform real-time analytics on the logs. The solution must support the replay of messages and must persist the logs.

Which IAM services should be used to meet these requirements? (Select TWO)

- A. Amazon Athena
- B. Amazon Kinesis
- C. Amazon SQS
- D. Amazon Elasticsearch
- E. Amazon EMR

**Answer:** BD

**Explanation:**

Amazon Kinesis and Amazon Elasticsearch are both suitable for forensic-logging solutions. Amazon Kinesis can collect, process, and analyze streaming data in

real time3. Amazon Elasticsearch can store, search, and analyze log data using the popular open-source tool Elasticsearch. The other options are not designed for forensic-logging purposes. Amazon Athena is a query service that can analyze data in S3, Amazon SQS is a message queue service that can decouple and scale microservices, and Amazon EMR is a big data platform that can run Apache Spark and Hadoop clusters.

#### NEW QUESTION 105

A company needs to store multiple years of financial records. The company wants to use Amazon S3 to store copies of these documents. The company must implement a solution to prevent the documents from being edited, replaced, or deleted for 7 years after the documents are stored in Amazon S3. The solution must also encrypt the documents at rest.

A security engineer creates a new S3 bucket to store the documents. What should the security engineer do next to meet these requirements?

- A. Configure S3 server-side encryption
- B. Create an S3 bucket policy that has an explicit deny rule for all users for s3:DeleteObject and s3:PutObject API call
- C. Configure S3 Object Lock to use governance mode with a retention period of 7 years.
- D. Configure S3 server-side encryption
- E. Configure S3 Versioning on the S3 bucket
- F. Configure S3 ObjectLock to use compliance mode with a retention period of 7 years.
- G. Configure S3 Versioning
- H. Configure S3 Intelligent-Tiering on the S3 bucket to move the documents to S3 Glacier Deep Archive storage
- I. Use S3 server-side encryption immediately
- J. Expire the objects after 7 years.
- K. Set up S3 Event Notifications and use S3 server-side encryption
- L. Configure S3 Event Notifications to target an AWS Lambda function that will review any S3 API call to the S3 bucket and deny the s3:DeleteObject and s3:PutObject API call
- M. Remove the S3 event notification after 7 years.

**Answer: B**

#### NEW QUESTION 107

A company is using AWS Organizations to manage multiple AWS accounts for its human resources, finance, software development, and production departments. All the company's developers are part of the software development AWS account.

The company discovers that developers have launched Amazon EC2 instances that were preconfigured with software that the company has not approved for use. The company wants to implement a solution to ensure that developers can launch EC2 instances with only approved software applications and only in the software development AWS account.

Which solution will meet these requirements?

- A. In the software development account, create AMIs of preconfigured instances that include only approved software
- B. Include the AMI IDs in the condition section of an AWS CloudFormation template to launch the appropriate AMI based on the AWS Region
- C. Provide the developers with the CloudFormation template to launch EC2 instances in the software development account.
- D. Create an Amazon EventBridge rule that runs when any EC2 RunInstances API event occurs in the software development account
- E. Specify AWS Systems Manager Run Command as a target of the rule
- F. Configure Run Command to run a script that will install all approved software onto the instances that the developers launch.
- G. Use an AWS Service Catalog portfolio that contains EC2 products with appropriate AMIs that include only approved software
- H. Grant the developers permission to portfolio access only the Service Catalog to launch a product in the software development account.
- I. In the management account, create AMIs of preconfigured instances that include only approved software
- J. Use AWS CloudFormation StackSets to launch the AMIs across any AWS account in the organization
- K. Grant the developers permission to launch the stack sets within the management account.

**Answer: C**

#### NEW QUESTION 111

A company has a web server in the AWS Cloud. The company will store the content for the web server in an Amazon S3 bucket. A security engineer must use an Amazon CloudFront distribution to speed up delivery of the content. None of the files can be publicly accessible from the S3 bucket directly.

Which solution will meet these requirements?

- A. Configure the permissions on the individual files in the S3 bucket so that only the CloudFront distribution has access to them.
- B. Create an origin access identity (OAI). Associate the OAI with the CloudFront distribution
- C. Configure the S3 bucket permissions so that only the OAI can access the files in the S3 bucket.
- D. Create an S3 role in AWS Identity and Access Management (IAM). Allow only the CloudFront distribution to assume the role to access the files in the S3 bucket.
- E. Create an S3 bucket policy that uses only the CloudFront distribution ID as the principal and the Amazon Resource Name (ARN) as the target.

**Answer: B**

#### NEW QUESTION 116

A development team is using an IAM Key Management Service (IAM KMS) CMK to try to encrypt and decrypt a secure string parameter from IAM Systems Manager Parameter Store. However, the development team receives an error message on each attempt.

Which issues that are related to the CMK could be reasons for the error? (Select TWO.)

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

**Answer: AD**

#### NEW QUESTION 121

An IAM user receives an Access Denied message when the user attempts to access objects in an Amazon S3 bucket. The user and the S3 bucket are in the same AWS account. The S3 bucket is configured to use server-side encryption with AWS KMS keys (SSE-KMS) to encrypt all of its objects at rest by using a customer

managed key from the same AWS account. The S3 bucket has no bucket policy defined. The IAM user has been granted permissions through an IAM policy that allows the kms:Decrypt permission to the customer managed key. The IAM policy also allows the s3:List\* and s3:Get\* permissions for the S3 bucket and its objects.

Which of the following is a possible reason that the IAM user cannot access the objects in the S3 bucket?

- A. The IAM policy needs to allow the kms:DescribeKey permission.
- B. The S3 bucket has been changed to use the AWS managed key to encrypt objects at rest.
- C. An S3 bucket policy needs to be added to allow the IAM user to access the objects.
- D. The KMS key policy has been edited to remove the ability for the AWS account to have full access to the key.

**Answer: D**

**Explanation:**

The possible reason that the IAM user cannot access the objects in the S3 bucket is D. The KMS key policy has been edited to remove the ability for the AWS account to have full access to the key.

This answer is correct because the KMS key policy is the primary way to control access to the KMS key, and it must explicitly allow the AWS account to have full access to the key. If the KMS key policy has been edited to remove this permission, then the IAM policy that grants kms:Decrypt permission to the IAM user has no effect, and the IAM user cannot decrypt the objects in the S3 bucket<sup>12</sup>.

The other options are incorrect because:

- A. The IAM policy does not need to allow the kms:DescribeKey permission, because this permission is not required for decrypting objects in S3 using SSE-KMS. The kms:DescribeKey permission allows getting information about a KMS key, such as its creation date, description, and key state<sup>3</sup>.
- B. The S3 bucket has not been changed to use the AWS managed key to encrypt objects at rest, because this would not cause an Access Denied message for the IAM user. The AWS managed key is a default KMS key that is created and managed by AWS for each AWS account and Region. The IAM user does not need any permissions on this key to use it for SSE-KMS<sup>4</sup>.
- C. An S3 bucket policy does not need to be added to allow the IAM user to access the objects, because the IAM user already has s3:List\* and s3:Get\* permissions for the S3 bucket and its objects through an IAM policy. An S3 bucket policy is an optional way to grant cross-account access or public access to an S3 bucket<sup>5</sup>.

References:

- 1: Key policies in AWS KMS 2: Using server-side encryption with AWS KMS keys (SSE-KMS) 3: AWS KMS API Permissions Reference 4: Using server-side encryption with Amazon S3 managed keys (SSE-S3) 5: Bucket policy examples

**NEW QUESTION 125**

A company uses AWS Organizations to run workloads in multiple AWS accounts. Currently, the individual team members at the company access all Amazon EC2 instances remotely by using SSH or Remote Desktop Protocol (RDP). The company does not have any audit trails, and security groups are occasionally open. The company must secure access management and implement a centralized logging solution.

Which solution will meet these requirements MOST securely?

- A. Configure trusted access for AWS System Manager in Organizations. Configure a bastion host from the management account. Replace SSH and RDP by using Systems Manager Session Manager from the management account. Configure Session Manager logging to Amazon CloudWatch Logs.
- B. Replace SSH and RDP with AWS Systems Manager Session Manager. Install Systems Manager Agent (SSM Agent) on the instances. Attach the AmazonSSMManagedInstanceCore role to the instances. Configure session data streaming to Amazon CloudWatch Logs. Create a separate logging account that has appropriate cross-account permissions to audit the log data.
- C. Install a bastion host in the management account. Reconfigure all SSH and RDP to allow access only from the bastion host. Install AWS Systems Manager Agent (SSM Agent) on the bastion host. Attach the AmazonSSMManagedInstanceCore role to the bastion host. Configure session data streaming to Amazon CloudWatch Logs in a separate logging account to audit log data.
- D. Replace SSH and RDP with AWS Systems Manager State Manager. Install Systems Manager Agent (SSM Agent) on the instances. Attach the AmazonSSMManagedInstanceCore role to the instances. Configure session data streaming to Amazon CloudTrail. Use CloudTrail Insights to analyze the trail data.

**Answer: C**

**Explanation:**

To meet the requirements of securing access management and implementing a centralized logging solution, the most secure solution would be to:

- Install a bastion host in the management account.
- Reconfigure all SSH and RDP to allow access only from the bastion host.
- Install AWS Systems Manager Agent (SSM Agent) on the bastion host.
- Attach the AmazonSSMManagedInstanceCore role to the bastion host.
- Configure session data streaming to Amazon CloudWatch Logs in a separate logging account to audit log data.

This solution provides the following security benefits:

- It uses AWS Systems Manager Session Manager instead of traditional SSH and RDP protocols, which provides a secure method for accessing EC2 instances without requiring inbound firewall rules or open ports.
- It provides audit trails by configuring Session Manager logging to Amazon CloudWatch Logs and creating a separate logging account to audit the log data.
- It uses the AWS Systems Manager Agent to automate common administrative tasks and improve the security posture of the instances.
- The separate logging account with cross-account permissions provides better data separation and improves security posture.

<https://aws.amazon.com/solutions/implementations/centralized-logging/>

**NEW QUESTION 129**

Which of the following bucket policies will ensure that objects being uploaded to a bucket called 'demo' are encrypted?

Please select:

- A. C:\Users\wk\Desktop\mudassar\Untitled.jpg

```
"Version": "2012-10-17",
  "Id": "PutObj",
  "Statement": [
    {
      "Sid": "DenyUploads",
      "Effect": "Deny",
      "Principal": "*",
      "Action": "s3:PutObject",
      "Resource": "arn:aws:s3:::demo/*",
      "Condition": {
        "StringNotEquals": {
          "s3:x-amz-server-side-encryption": "aws:kms"
        }
      }
    }
  ]
}
```

B. C:\Users\wk\Desktop\mudassar\Untitled.jpg

```
"Version": "2012-10-17",
  "Id": "PutObj",
  "Statement": [
    {
      "Sid": "DenyUploads",
      "Effect": "Deny",
      "Principal": "*",
      "Action": "s3:PutObject",
      "Resource": "arn:aws:s3:::demo/*",
      "Condition": {
        "StringEquals": {
          "s3:x-amz-server-side-encryption": "aws:kms"
        }
      }
    }
  ]
}
```

C. C:\Users\wk\Desktop\mudassar\Untitled.jpg

```
"Version": "2012-10-17",
  "Id": "PutObj",
  "Statement": [
    {
      "Sid": "DenyUploads",
      "Effect": "Deny",
      "Principal": "*",
      "Action": "s3:PutObject",
      "Resource": "arn:aws:s3:::demo/*"
    }
  ]
}
```

D. C:\Users\wk\Desktop\mudassar\Untitled.jpg

```
"Version": "2012-10-17",
  "Id": "PutObj",
  "Statement": [
    {
      "Sid": "DenyUploads",
      "Effect": "Deny",
      "Principal": "*",
      "Action": "s3:PutObjectEncrypted",
      "Resource": "arn:aws:s3:::demo/*"
    }
  ]
}
```

**Answer: A**

**Explanation:**

The condition of "s3:x-amz-server-side-encryption": "IAM:kms" ensures that objects uploaded need to be encrypted. Options B,C and D are invalid because you have to ensure the condition of ns3:x-amz-server-side-encryption": "IAM:kms" is present

For more information on IAM KMS best practices, just browse to the below URL: <https://dl.IAMstatic.com/whitepapers/IAM-kms-best-practices.pdf>  
Submit your Feedback/Queries to our Expert

#### NEW QUESTION 134

A company is using AWS WAF to protect a customized public API service that is based on Amazon EC2 instances. The API uses an Application Load Balancer. The AWS WAF web ACL is configured with an AWS Managed Rules rule group. After a software upgrade to the API and the client application, some types of requests are no longer working and are causing application stability issues. A security engineer discovers that AWS WAF logging is not turned on for the web ACL. The security engineer needs to immediately return the application to service, resolve the issue, and ensure that logging is not turned off in the future. The security engineer turns on logging for the web ACL and specifies Amazon Cloud-Watch Logs as the destination. Which additional set of steps should the security engineer take to meet the re-quirements?

- A. Edit the rules in the web ACL to include rules with Count action
- B. Review the logs to determine which rule is blocking the request
- C. Modify the IAM policy of all AWS WAF administrators so that they cannot remove the logging configuration for any AWS WAF web ACLs.
- D. Edit the rules in the web ACL to include rules with Count action
- E. Review the logs to determine which rule is blocking the request
- F. Modify the AWS WAF resource policy so that AWS WAF administrators cannot remove the logging configuration for any AWS WAF web ACLs.
- G. Edit the rules in the web ACL to include rules with Count and Challenge action
- H. Review the logs to determine which rule is blocking the request
- I. Modify the AWS WAF resource policy so that AWS WAF administrators cannot remove the logging configuration for any AWS WAF web ACLs.
- J. Edit the rules in the web ACL to include rules with Count and Challenge action
- K. Review the logs to determine which rule is blocking the request
- L. Modify the IAM policy of all AWS WAF administrators so that they cannot remove the logging configuration for any AWS WAF web ACLs.

**Answer:** A

#### Explanation:

This answer is correct because it meets the requirements of returning the application to service, resolving the issue, and ensuring that logging is not turned off in the future. By editing the rules in the web ACL to include rules with Count actions, the security engineer can test the effect of each rule without blocking or allowing requests. By reviewing the logs, the security engineer can identify which rule is causing the problem and modify or delete it accordingly. By modifying the IAM policy of all AWS WAF administrators, the security engineer can restrict their permissions to prevent them from removing the logging configuration for any AWS WAF web ACLs.

#### NEW QUESTION 138

A company is running its workloads in a single AWS Region and uses AWS Organizations. A security engineer must implement a solution to prevent users from launching resources in other Regions. Which solution will meet these requirements with the LEAST operational overhead?

- A. Create an IAM policy that has an aws RequestedRegion condition that allows actions only in the designated Region Attach the policy to all users.
- B. Create an IAM policy that has an aws RequestedRegion condition that denies actions that are not in the designated Region Attach the policy to the AWS account in AWS Organizations.
- C. Create an IAM policy that has an aws RequestedRegion condition that allows the desired actions Attach the policy only to the users who are in the designated Region.
- D. Create an SCP that has an aws RequestedRegion condition that denies actions that are not in the designated Region
- E. Attach the SCP to the AWS account in AWS Organizations.

**Answer:** D

#### Explanation:

Although you can use a IAM policy to prevent users launching resources in other regions. The best practice is to use SCP when using AWS organizations.  
[https://docs.aws.amazon.com/organizations/latest/userguide/orgs\\_manage\\_policies\\_scps\\_examples\\_general.htm](https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scps_examples_general.htm)

#### NEW QUESTION 139

A company hosts multiple externally facing applications, each isolated in its own IAM account The company's Security team has enabled IAM WAF. IAM Config, and Amazon GuardDuty on all accounts. The company's Operations team has also joined all of the accounts to IAM Organizations and established centralized logging for CloudTrail, IAM Config, and GuardDuty. The company wants the Security team to take a reactive remediation in one account, and automate implementing this remediation as proactive prevention in all the other accounts. How should the Security team accomplish this?

- A. Update the IAM WAF rules in the affected account and use IAM Firewall Manager to push updated IAM WAF rules across all other accounts.
- B. Use GuardDuty centralized logging and Amazon SNS to set up alerts to notify all application teams of security incidents.
- C. Use GuardDuty alerts to write an IAM Lambda function that updates all accounts by adding additional NACLs on the Amazon EC2 instances to block known malicious IP addresses.
- D. Use IAM Shield Advanced to identify threats in each individual account and then apply the account-based protections to all other accounts through Organizations.

**Answer:** C

#### NEW QUESTION 141

A company has a guideline that mandates the encryption of all Amazon S3 bucket data in transit. A security engineer must implement an S3 bucket policy that denies any S3 operations if data is not encrypted. Which S3 bucket policy will meet this requirement?

A.

```
{
  "Version": "2012-10-17",
  "Statement": [{
    "Sid": "AllowSSLRequestOnly",
    "Action": "s3:*",
    "Effect": "Deny",
    "Resource": [
      "arn:aws:s3:::DOC-EXAMPLE-BUCKET",
      "arn:aws:s3:::DOC-EXAMPLE-BUCKET/*"
    ],
    "Condition": {
      "Bool": {
        "aws:SecureTransport": "true"
      }
    }
  ],
  "Principal": "*"
}]
}
```

B. {

```
  "Version": "2012-10-17",
  "Statement": [{
    "Sid": "AllowSSLRequestOnly",
    "Action": "s3:*",
    "Effect": "Deny",
    "Resource": [
      "arn:aws:s3:::DOC-EXAMPLE-BUCKET",
      "arn:aws:s3:::DOC-EXAMPLE-BUCKET/*"
    ],
    "Condition": {
      "Bool": {
        "aws:SecureTransport": "false"
      }
    }
  ],
  "Principal": "*"
}]
}
```

C. {

```
  "Version": "2012-10-17",
  "Statement": [{
    "Sid": "AllowSSLRequestOnly",
    "Action": "s3:*",
    "Effect": "Deny",
    "Resource": [
      "arn:aws:s3:::DOC-EXAMPLE-BUCKET",
      "arn:aws:s3:::DOC-EXAMPLE-BUCKET/*"
    ],
    "Condition": {
      "StringNotEquals": {
        "s3:x-amz-server-side-encryption": "AES256"
      }
    }
  ],
  "Principal": "*"
}]
}
```

D. A screenshot of a computer code Description automatically generated {

```
  "Version": "2012-10-17",
  "Statement": [{
    "Sid": "AllowSSLRequestOnly",
    "Action": "s3:*",
    "Effect": "Deny",
    "Resource": [
      "arn:aws:s3:::DOC-EXAMPLE-BUCKET",
      "arn:aws:s3:::DOC-EXAMPLE-BUCKET/*"
    ],
    "Condition": {
      "StringNotEquals": {
        "s3:x-amz-server-side-encryption": true
      }
    }
  ],
  "Principal": "*"
}]
}
```

Answer: B

Explanation:

<https://aws.amazon.com/blogs/security/how-to-use-bucket-policies-and-apply-defense-in-depth-to-help-secure-y>

**NEW QUESTION 146**

A company became aware that one of its access keys was exposed on a code sharing website 11 days ago. A Security Engineer must review all use of the exposed access keys to determine the extent of the exposure. The company enabled IAM CloudTrail in all regions when it opened the account. Which of the following will allow the Security Engineer to complete the task?

- A. Filter the event history on the exposed access key in the CloudTrail console. Examine the data from the past 11 days.
- B. Use the IAM CLI to generate an IAM credential report. Extract all the data from the past 11 days.
- C. Use Amazon Athena to query the CloudTrail logs from Amazon S3. Retrieve the rows for the exposed access key for the past 11 days.
- D. Use the Access Advisor tab in the IAM console to view all of the access key activity for the past 11 days.

**Answer: C**

**Explanation:**

Amazon Athena is a service that enables you to analyze data in Amazon S3 using standard SQL. You can use Athena to query the CloudTrail logs that are stored in S3 and filter them by the exposed access key and the date range. The other options are not effective ways to review the use of the exposed access key.

**NEW QUESTION 150**

A company uses several AWS CloudFormation stacks to handle the deployment of a suite of applications. The leader of the company's application development team notices that the stack deployments fail with permission errors when some team members try to deploy the stacks. However, other team members can deploy the stacks successfully.

The team members access the account by assuming a role that has a specific set of permissions that are necessary for the job responsibilities of the team members. All team members have permissions to perform operations on the stacks.

Which combination of steps will ensure consistent deployment of the stacks MOST securely? (Select THREE.)

- A. Create a service role that has a composite principal that contains each service that needs the necessary permission.
- B. Configure the role to allow the sts:AssumeRole action.
- C. Create a service role that has cloudformation.amazonaws.com as the service principal.
- D. Configure the role to allow the sts:AssumeRole action.
- E. For each required set of permissions, add a separate policy to the role to allow those permissions.
- F. Add the ARN of each CloudFormation stack in the resource field of each policy.
- G. For each required set of permissions, add a separate policy to the role to allow those permissions.
- H. Add the ARN of each service that needs the permissions in the resource field of the corresponding policy.
- I. Update each stack to use the service role.
- J. Add a policy to each member role to allow the iam:PassRole action.
- K. Set the policy's resource field to the ARN of the service role.

**Answer: BDF**

**NEW QUESTION 152**

A security engineer logs in to the AWS Lambda console with administrator permissions. The security engineer is trying to view logs in Amazon CloudWatch for a Lambda function that is named myFunction.

When the security engineer chooses the option in the Lambda console to view logs in CloudWatch, an "error loading Log Streams" message appears.

The IAM policy for the Lambda function's execution role contains the following:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "logs:CreateLogGroup",
      "Resource": "arn:aws:logs:us-east-1:111111111111:*"
    },
    {
      "Effect": "Allow",
      "Action": ["logs:PutLogEvents"],
      "Resource": ["arn:aws:logs:us-east-1:111111111111:log-
group:/aws/Lambda/myFunction:*"]
    }
  ]
}
```

How should the security engineer correct the error?

- A. Move the logs:CreateLogGroup action to the second Allow statement.
- B. Add the logs:PutDestination action to the second Allow statement.
- C. Add the logs:GetLogEvents action to the second Allow statement.
- D. Add the logs:CreateLogStream action to the second Allow statement.

**Answer: D**

**Explanation:**

CloudWatchLogsReadOnlyAccess doesn't include "logs:CreateLogStream" but it includes "logs:Get\*" <https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/iam-identity-based-access-control-cwl.html#:~:te>

**NEW QUESTION 155**

A company needs to retain log data archives for several years to be compliant with regulations. The log data is no longer used but it must be retained. What is the MOST secure and cost-effective solution to meet these requirements?

- A. Archive the data to Amazon S3 and apply a restrictive bucket policy to deny the s3 DeleteObject API.
- B. Archive the data to Amazon S3 Glacier and apply a Vault Lock policy.
- C. Archive the data to Amazon S3 and replicate it to a second bucket in a second IAM Region. Choose the S3 Standard-Infrequent Access (S3 Standard-1A) storage class and apply a restrictive bucket policy to deny the s3 DeleteObject API.

D. Migrate the log data to a 16 T8 Amazon Elastic Block Store (Amazon EBS) volume Create a snapshot of the EBS volume

**Answer: B**

**Explanation:**

To securely and cost-effectively retain log data archives for several years, the company should do the following:

- Archive the data to Amazon S3 Glacier and apply a Vault Lock policy. This allows the company to use a low-cost storage class that is designed for long-term archival of data that is rarely accessed. It also allows the company to enforce compliance controls on their S3 Glacier vault by locking a vault access policy that cannot be changed.

**NEW QUESTION 156**

A company has several petabytes of data. The company must preserve this data for 7 years to comply with regulatory requirements. The company's compliance team asks a security officer to develop a strategy that will prevent anyone from changing or deleting the data. Which solution will meet this requirement MOST cost-effectively?

- A. Create an Amazon S3 bucket
- B. Configure the bucket to use S3 Object Lock in compliance mode
- C. Upload the data to the bucket
- D. Create a resource-based bucket policy that meets all the regulatory requirements.
- E. Create an Amazon S3 bucket
- F. Configure the bucket to use S3 Object Lock in governance mode
- G. Upload the data to the bucket
- H. Create a user-based IAM policy that meets all the regulatory requirements.
- I. Create a vault in Amazon S3 Glacier
- J. Create a Vault Lock policy in S3 Glacier that meets all the regulatory requirements
- K. Upload the data to the vault.
- L. Create an Amazon S3 bucket
- M. Upload the data to the bucket
- N. Use a lifecycle rule to transition the data to a vault in S3 Glacier
- O. Create a Vault Lock policy that meets all the regulatory requirements.

**Answer: C**

**Explanation:**

To preserve the data for 7 years and prevent anyone from changing or deleting it, the security officer needs to use a service that can store the data securely and enforce compliance controls. The most cost-effective way to do this is to use Amazon S3 Glacier, which is a low-cost storage service for data archiving and long-term backup. S3 Glacier allows you to create a vault, which is a container for storing archives. Archives are any data such as photos, videos, or documents that you want to store durably and reliably.

S3 Glacier also offers a feature called Vault Lock, which helps you to easily deploy and enforce compliance controls for individual vaults with a Vault Lock policy. You can specify controls such as "write once read many" (WORM) in a Vault Lock policy and lock the policy from future edits. Once a Vault Lock policy is locked, the policy can no longer be changed or deleted. S3 Glacier enforces the controls set in the Vault Lock policy to help achieve your compliance objectives. For example, you can use Vault Lock policies to enforce data retention by denying deletes for a specified period of time.

To use S3 Glacier and Vault Lock, the security officer needs to follow these steps:

- Create a vault in S3 Glacier using the AWS Management Console, AWS Command Line Interface (AWS CLI), or AWS SDKs.
- Create a Vault Lock policy in S3 Glacier that meets all the regulatory requirements using the IAM policy language. The policy can include conditions such as `aws:CurrentTime` or `aws:SecureTransport` to further restrict access to the vault.
- Initiate the lock by attaching the Vault Lock policy to the vault, which sets the lock to an in-progress state and returns a lock ID. While the policy is in the in-progress state, you have 24 hours to validate your Vault Lock policy before the lock ID expires. To prevent your vault from exiting the in-progress state, you must complete the Vault Lock process within these 24 hours. Otherwise, your Vault Lock policy will be deleted.
- Use the lock ID to complete the lock process. If the Vault Lock policy doesn't work as expected, you can stop the Vault Lock process and restart from the beginning.
- Upload the data to the vault using either direct upload or multipart upload methods. For more information about S3 Glacier and Vault Lock, see S3 Glacier Vault Lock.

The other options are incorrect because:

- Option A is incorrect because creating an Amazon S3 bucket and configuring it to use S3 Object Lock in compliance mode will not prevent anyone from changing or deleting the data. S3 Object Lock is a feature that allows you to store objects using a WORM model in S3. You can apply two types of object locks: retention periods and legal holds. A retention period specifies a fixed period of time during which an object remains locked. A legal hold is an indefinite lock on an object until it is removed. However, S3 Object Lock only prevents objects from being overwritten or deleted by any user, including the root user in your AWS account. It does not prevent objects from being modified by other means, such as changing their metadata or encryption settings. Moreover, S3 Object Lock requires that you enable versioning on your bucket, which will incur additional storage costs for storing multiple versions of an object.
- Option B is incorrect because creating an Amazon S3 bucket and configuring it to use S3 Object Lock in governance mode will not prevent anyone from changing or deleting the data. S3 Object Lock in governance mode works similarly to compliance mode, except that users with specific IAM permissions can change or delete objects that are locked. This means that users who have `s3:BypassGovernanceRetention` permission can remove retention periods or legal holds from objects and overwrite or delete them before they expire. This option does not provide strong enforcement for compliance controls as required by the regulatory requirements.
- Option D is incorrect because creating an Amazon S3 bucket and using a lifecycle rule to transition the data to a vault in S3 Glacier will not prevent anyone from changing or deleting the data. Lifecycle rules are actions that Amazon S3 automatically performs on objects during their lifetime. You can use lifecycle rules to transition objects between storage classes or expire them after a certain period of time. However, lifecycle rules do not apply any compliance controls on objects or prevent them from being modified or deleted by users. Moreover, transitioning objects from S3 to S3 Glacier using lifecycle rules will incur additional charges for retrieval requests and data transfers.

**NEW QUESTION 159**

A company has multiple accounts in the AWS Cloud. Users in the developer account need to have access to specific resources in the production account. What is the MOST secure way to provide this access?

- A. Create one IAM user in the production account
- B. Grant the appropriate permissions to the resources that are needed

- C. Share the password only with the users that need access.
- D. Create cross-account access with an IAM role in the developer account
- E. Grant the appropriate permissions to this role
- F. Allow users in the developer account to assume this role to access the production resources.
- G. Create cross-account access with an IAM user account in the production account
- H. Grant the appropriate permissions to this user account
- I. Allow users in the developer account to use this user account to access the production resources.
- J. Create cross-account access with an IAM role in the production account
- K. Grant the appropriate permissions to this role
- L. Allow users in the developer account to assume this role to access the production resources.

**Answer:** D

**Explanation:**

[https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial\\_cross-account-with-roles.html](https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial_cross-account-with-roles.html)

**NEW QUESTION 164**

A company has deployed Amazon GuardDuty and now wants to implement automation for potential threats. The company has decided to start with RDP brute force attacks that come from Amazon EC2 instances in the company's AWS environment. A security engineer needs to implement a solution that blocks the detected communication from a suspicious instance until investigation and potential remediation can occur. Which solution will meet these requirements?

- A. Configure GuardDuty to send the event to an Amazon Kinesis data stream
- B. Process the event with an Amazon Kinesis Data Analytics for Apache Flink application that sends a notification to the company through Amazon Simple Notification Service (Amazon SNS). Add rules to the network ACL to block traffic to and from the suspicious instance.
- C. Configure GuardDuty to send the event to Amazon EventBridge (Amazon CloudWatch Events). Deploy an AWS WAF web ACL
- D. Process the event with an AWS Lambda function that sends a notification to the company through Amazon Simple Notification Service (Amazon SNS) and adds a web ACL rule to block traffic to and from the suspicious instance.
- E. Enable AWS Security Hub to ingest GuardDuty findings and send the event to Amazon EventBridge (Amazon CloudWatch Events). Deploy AWS Network Firewall
- F. Process the event with an AWS Lambda function that adds a rule to a Network Firewall firewall policy to block traffic to and from the suspicious instance.
- G. Enable AWS Security Hub to ingest GuardDuty findings
- H. Configure an Amazon Kinesis data stream as an event destination for Security Hub
- I. Process the event with an AWS Lambda function that replaces the security group of the suspicious instance with a security group that does not allow any connections.

**Answer:** C

**Explanation:**

<https://aws.amazon.com/blogs/security/automatically-block-suspicious-traffic-with-aws-network-firewall-and-a>

**NEW QUESTION 169**

An organization must establish the ability to delete an IAM KMS Customer Master Key (CMK) within a 24-hour timeframe to keep it from being used for encrypt or decrypt operations. Which of the following actions will address this requirement?

- A. Manually rotate a key within KMS to create a new CMK immediately
- B. Use the KMS import key functionality to execute a delete key operation
- C. Use the schedule key deletion function within KMS to specify the minimum wait period for deletion
- D. Change the KMS CMK alias to immediately prevent any services from using the CMK.

**Answer:** C

**Explanation:**

the schedule key deletion function within KMS allows you to specify a waiting period before deleting a customer master key (CMK)<sup>4</sup>. The minimum waiting period is 7 days and the maximum is 30 days<sup>5</sup>. This function prevents the CMK from being used for encryption or decryption operations during the waiting period<sup>4</sup>. The other options are either invalid or ineffective for deleting a CMK within a 24-hour timeframe.

**NEW QUESTION 174**

A company is hosting multiple applications within a single VPC in its IAM account. The applications are running behind an Application Load Balancer that is associated with an IAM WAF web ACL. The company's security team has identified that multiple port scans are originating from a specific range of IP addresses on the internet.

A security engineer needs to deny access from the offending IP addresses. Which solution will meet these requirements?

- A. Modify the IAM WAF web ACL with an IP set match rule statement to deny incoming requests from the IP address range.
- B. Add a rule to all security groups to deny the incoming requests from the IP address range.
- C. Modify the IAM WAF web ACL with a rate-based rule statement to deny the incoming requests from the IP address range.
- D. Configure the IAM WAF web ACL with regex match condition
- E. Specify a pattern set to deny the incoming requests based on the match condition

**Answer:** A

**Explanation:**

Note that the IP is known and the question wants us to deny access from that particular address and so we can use IP set match policy of WAF to block access.

**NEW QUESTION 176**

A company needs to use HTTPS when connecting to its web applications to meet compliance requirements. These web applications run in Amazon VPC on Amazon EC2 instances behind an Application Load Balancer (ALB). A security engineer wants to ensure that the load balancer will only accept connections over port 443, even if the ALB is mistakenly configured with an HTTP listener.

Which configuration steps should the security engineer take to accomplish this task?

- A. Create a security group with a rule that denies Inbound connections from 0.0.0 0/0 on port 00. Attach this security group to the ALB to overwrite more permissive rules from the ALB's default securitygroup.
- B. Create a network ACL that denies inbound connections from 0 0.0.0/0 on port 80 Associate the network ACL with the VPC s internet gateway
- C. Create a network ACL that allows outbound connections to the VPC IP range on port 443 only. Associate the network ACL with the VPC's internet gateway.
- D. Create a security group with a single inbound rule that allows connections from 0.0.0 0/0 on port 443. Ensure this security group is the only one associated with the ALB

**Answer:** D

**Explanation:**

To ensure that the load balancer only accepts connections over port 443, the security engineer should do the following:

- Create a security group with a single inbound rule that allows connections from 0.0.0.0/0 on port 443. This means that the security group allows HTTPS traffic from any source IP address.
- Ensure this security group is the only one associated with the ALB. This means that the security group overrides any other rules that might allow HTTP traffic on port 80.

**NEW QUESTION 181**

Developers in an organization have moved from a standard application deployment to containers. The Security Engineer is tasked with ensuring that the containers are secure. Which strategies will reduce the attack surface and enhance the security of the containers? (Select TWO.)

- A. Use the containers to automate security deployments.
- B. Limit resource consumption (CPU, memory), networking connections, ports, and unnecessary container libraries.
- C. Segregate containers by host, function, and data classification.
- D. Use Docker Notary framework to sign task definitions.
- E. Enable container breakout at the host kernel.

**Answer:** AC

**Explanation:**

these are the strategies that can reduce the attack surface and enhance the security of the containers. Containers are a method of packaging and running applications in isolated environments. Using containers to automate security deployments can help ensure that security patches and updates are applied consistently and quickly across the container fleet. Segregating containers by host, function, and data classification can help limit the impact of a compromise and enforce the principle of least privilege. The other options are either irrelevant or risky for securing containers.

**NEW QUESTION 185**

A company plans to create individual child accounts within an existing organization in IAM Organizations for each of its DevOps teams. IAM CloudTrail has been enabled and configured on all accounts to write audit logs to an Amazon S3 bucket in a centralized IAM account. A security engineer needs to ensure that DevOps team members are unable to modify or disable this configuration. How can the security engineer meet these requirements?

- A. Create an IAM policy that prohibits changes to the specific CloudTrail trail and apply the policy to the IAM account root user.
- B. Create an S3 bucket policy in the specified destination account for the CloudTrail trail that prohibits configuration changes from the IAM account root user in the source account.
- C. Create an SCP that prohibits changes to the specific CloudTrail trail and apply the SCP to the appropriate organizational unit or account in Organizations.
- D. Create an IAM policy that prohibits changes to the specific CloudTrail trail and apply the policy to a new IAM group
- E. Have team members use individual IAM accounts that are members of the new IAM group.

**Answer:** D

**NEW QUESTION 188**

A company is running internal microservices on Amazon Elastic Container Service (Amazon ECS) with the Amazon EC2 launch type. The company is using Amazon Elastic Container Registry (Amazon ECR) private repositories. A security engineer needs to encrypt the private repositories by using AWS Key Management Service (AWS KMS). The security engineer also needs to analyze the container images for any common vulnerabilities and exposures (CVEs). Which solution will meet these requirements?

- A. Enable KMS encryption on the existing ECR repository
- B. Install Amazon Inspector Agent from the ECS container instances' user dat
- C. Run an assessment with the CVE rules.
- D. Recreate the ECR repositories with KMS encryption and ECR scanning enable
- E. Analyze the scan report after the next push of images.
- F. Recreate the ECR repositories with KMS encryption and ECR scanning enable
- G. Install AWS Systems Manager Agent on the ECS container instance
- H. Run an inventory report.
- I. Enable KMS encryption on the existing ECR repository
- J. Use AWS Trusted Advisor to check the ECS container instances and to verify the findings against a list of current CVEs.

**Answer:** B

**NEW QUESTION 193**

Your development team is using access keys to develop an application that has access to S3 and DynamoDB. A new security policy has outlined that the credentials should not be older than 2 months, and should be rotated. How can you achieve this? Please select:

- A. Use the application to rotate the keys in every 2 months via the SDK
- B. Use a script to query the creation date of the key
- C. If older than 2 months, create new access key and update all applications to use it inactivate the old key and delete it.
- D. Delete the user associated with the keys after every 2 month

- E. Then recreate the user again.
- F. Delete the IAM Role associated with the keys after every 2 month
- G. Then recreate the IAM Role again.

**Answer:** B

**Explanation:**

One can use the CLI command list-access-keys to get the access keys. This command also returns the "CreateDate" of the keys. If the CreateDate is older than 2 months, then the keys can be deleted.

The Returns list-access-keys CLI command returns information about the access key IDs associated with the specified IAM user. If there are none, the action returns an empty list

Option A is incorrect because you might as use a script for such maintenance activities Option C is incorrect because you would not rotate the users themselves

Option D is incorrect because you don't use IAM roles for such a purpose For more information on the CLI command, please refer to the below Link:

<http://docs.IAM.amazon.com/cli/latest/reference/iam/list-access-keys.html>

The correct answer is: Use a script to query the creation date of the keys. If older than 2 months, create new access key and update all applications to use it inactivate the old key and delete it.

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**NEW QUESTION 197**

A Security Engineer is working with a Product team building a web application on AWS. The application uses Amazon S3 to host the static content, Amazon API Gateway to provide RESTful services; and Amazon DynamoDB as the backend data store. The users already exist in a directory that is exposed through a SAML identity provider.

Which combination of the following actions should the Engineer take to enable users to be authenticated into the web application and call APIs? (Choose three.)

- A. Create a custom authorization service using AWS Lambda.
- B. Configure a SAML identity provider in Amazon Cognito to map attributes to the Amazon Cognito user pool attributes.
- C. Configure the SAML identity provider to add the Amazon Cognito user pool as a relying party.
- D. Configure an Amazon Cognito identity pool to integrate with social login providers.
- E. Update DynamoDB to store the user email addresses and passwords.
- F. Update API Gateway to use a COGNITO\_USER\_POOLS authorizer.

**Answer:** BCF

**Explanation:**

The combination of the following actions should the Engineer take to enable users to be authenticated into the web application and call APIs are:

➤ B. Configure a SAML identity provider in Amazon Cognito to map attributes to the Amazon Cognito user pool attributes. This is a necessary step to federate the existing users from the SAML identity provider to the Amazon Cognito user pool, which will be used for authentication and authorization1.

➤ C. Configure the SAML identity provider to add the Amazon Cognito user pool as a relying party. This is a necessary step to establish a trust relationship between the SAML identity provider and the Amazon Cognito user pool, which will allow the users to sign in using their existing credentials2.

➤ F. Update API Gateway to use a COGNITO\_USER\_POOLS authorizer. This is a necessary step to enable API Gateway to use the Amazon Cognito user pool as an authorizer for the RESTful services, which will validate the identity or access tokens that are issued by Amazon Cognito when a user signs in successfully3. The other options are incorrect because:

➤ A. Creating a custom authorization service using AWS Lambda is not a necessary step, because Amazon Cognito user pools can provide built-in authorization features, such as scopes and groups, that can be used to control access to API resources4.

➤ D. Configuring an Amazon Cognito identity pool to integrate with social login providers is not a necessary step, because the users already exist in a directory that is exposed through a SAML identity provider, and there is no requirement to support social login providers5.

➤ E. Updating DynamoDB to store the user email addresses and passwords is not a necessary step, because the user credentials are already stored in the SAML identity provider, and there is no need to duplicate them in DynamoDB6.

References:

1: Using Tokens with User Pools 2: Adding SAML Identity Providers to a User Pool 3: Control Access to a REST API Using Amazon Cognito User Pools as Authorizer 4: API Authorization with Resource Servers and OAuth 2.0 Scopes 5: Using Identity Pools (Federated Identities) 6: Amazon DynamoDB

**NEW QUESTION 200**

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