

# Amazon-Web-Services

## Exam Questions SCS-C01

AWS Certified Security- Specialty



#### NEW QUESTION 1

A company uses Amazon Elastic Container Service (Amazon ECS) containers that have the Fargate launch type. The containers run web and mobile applications that are written in Java and Node.js. To meet network segmentation requirements, each of the company's business units deploys applications in its own dedicated AWS account.

Each business unit stores container images in an Amazon Elastic Container Registry (Amazon ECR) private registry in its own account.

A security engineer must recommend a solution to scan ECS containers and ECR registries for vulnerabilities in operating systems and programming language libraries.

The company's audit team must be able to identify potential vulnerabilities that exist in any of the accounts where applications are deployed.

Which solution will meet these requirements?

- A. In each account, update the ECR registry to use Amazon Inspector instead of the default scanning service
- B. Configure Amazon Inspector to forward vulnerability findings to AWS Security Hub in a central security account
- C. Provide access for the audit team to use Security Hub to review the findings.
- D. In each account, configure AWS Config to monitor the configuration of the ECS containers and the ECR registry
- E. Configure AWS Config conformance packs for vulnerability scanning
- F. Create an AWS Config aggregator in a central account to collect configuration and compliance details from all accounts
- G. Provide the audit team with access to AWS Config in the account where the aggregator is configured.
- H. In each account, configure AWS Audit Manager to scan the ECS containers and the ECR registry. Configure Audit Manager to forward vulnerability findings to AWS Security Hub in a central security account
- I. Provide access for the audit team to use Security Hub to review the findings.
- J. In each account, configure Amazon GuardDuty to scan the ECS containers and the ECR registry. Configure GuardDuty to forward vulnerability findings to AWS Security Hub in a central security account
- K. Provide access for the audit team to use Security Hub to review the findings.

**Answer: B**

#### Explanation:

➤ Option B: This option meets the requirements of scanning ECS containers and ECR registries for vulnerabilities, and providing a centralized view of the findings for the audit team. AWS Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources. AWS Config conformance packs are a collection of AWS Config rules and remediation actions that can be easily deployed as a single entity in an account and a Region or across an organization in AWS Organizations. Conformance packs can help you manage configuration compliance of your AWS resources at scale by using a common framework and packaging model. You can use prebuilt conformance packs for vulnerability scanning, such as CIS Operating System Security Configuration Benchmarks or Amazon Inspector Rules for Linux Instances<sup>1</sup>. You can also create custom conformance packs to scan for vulnerabilities in programming language libraries. AWS Config aggregator is a feature that enables you to aggregate configuration and compliance data from multiple accounts and Regions into a single account and Region<sup>2</sup>. You can provide access for the audit team to use AWS Config in the account where the aggregator is configured, and view the aggregated data in the AWS Config console or API.

#### NEW QUESTION 2

An IT department currently has a Java web application deployed on Apache Tomcat running on Amazon EC2 instances. All traffic to the EC2 instances is sent through an internet-facing Application Load Balancer (ALB)

The Security team has noticed during the past two days thousands of unusual read requests coming from hundreds of IP addresses. This is causing the Tomcat server to run out of threads and reject new connections

Which the SIMPLEST change that would address this server issue?

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

**Answer: A**

#### Explanation:

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

#### NEW QUESTION 3

A company deployed IAM Organizations to help manage its increasing number of IAM accounts. A security engineer wants to ensure only principals in the Organization structure can access a specific Amazon S3 bucket. The solution must also minimize operational overhead

Which solution will meet these requirements?

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

**Answer: D**

#### NEW QUESTION 4

A company wants to prevent SSH access through the use of SSH key pairs for any Amazon Linux 2 Amazon EC2 instances in its AWS account. However, a system administrator occasionally will need to access these EC2 instances through SSH in an emergency. For auditing purposes, the company needs to record any commands that a user runs in an EC2 instance.

What should a security engineer do to configure access to these EC2 instances to meet these requirements?

- A. Use the EC2 serial console Configure the EC2 serial console to save all commands that are entered to an Amazon S3 bucket

- B. Provide the EC2 instances with an IAM role that allows the EC2 serial console to access Amazon S3. Configure an IAM account for the system administrator
- C. Provide an IAM policy that allows the IAM account to use the EC2 serial console.
- D. Use EC2 Instance Connect Configure EC2 Instance Connect to save all commands that are entered to Amazon CloudWatch Log
- E. Provide the EC2 instances with an IAM role that allows the EC2 instances to access CloudWatch Logs Configure an IAM account for the system administrator
- F. Provide an IAM policy that allows the IAM account to use EC2 Instance Connect.
- G. Use an EC2 key pair with an EC2 instance that needs SSH access Access the EC2 instance with this key pair by using SS
- H. Configure the EC2 instance to save all commands that are entered to Amazon CloudWatch Log
- I. Provide the EC2 instance with an IAM role that allows the EC2 instance to access Amazon S3 and CloudWatch Logs.
- J. Use AWS Systems Manager Session Manager Configure Session Manager to save all commands that are entered in a session to an Amazon S3 bucket
- K. Provide the EC2 instances with an IAM role that allows Systems Manager to manage the EC2 instance
- L. Configure an IAM account for the system administrator Provide an IAM policy that allows the IAM account to use Session Manager.

**Answer:** D

**Explanation:**

Open the AWS Systems Manager console at <https://console.aws.amazon.com/systems-manager/>. In the navigation pane, choose Session Manager. Choose the Preferences tab, and then choose Edit. Select the check box next to Enable under S3 logging. (Recommended) Select the check box next to Allow only encrypted S3 buckets. With this option turned on, log data is encrypted using the server-side encryption key specified for the bucket. If you don't want to encrypt the log data that is sent to Amazon S3, clear the check box. You must also clear the check box if encryption isn't allowed on the S3 bucket.

**NEW QUESTION 5**

A company needs to improve its ability to identify and prevent IAM policies that grant public access or cross-account access to resources. The company has implemented AWS Organizations and has started using AWS Identity and Access Management Access Analyzer to refine overly broad access to accounts in the organization.

A security engineer must automate a response in the company's organization for any newly created policies that are overly permissive. The automation must remediate external access and must notify the company's security team.

Which combination of steps should the security engineer take to meet these requirements? (Select THREE.)

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

**Answer:** ACF

**Explanation:**

The correct answer is A, C, and F.

To automate a response for any newly created policies that are overly permissive, the security engineer needs to use a combination of services that can monitor, analyze, remediate, and notify the security incidents.

Option A is correct because creating an AWS Step Functions state machine that checks the resource type in the finding and adds an explicit Deny statement in the trust policy for the IAM role is a valid way to remediate external access. AWS Step Functions is a service that allows you to coordinate multiple AWS services into serverless workflows. You can use Step Functions to invoke AWS Lambda functions, which can modify the IAM policies programmatically. You can also use Step Functions to publish a notification to an Amazon SNS topic, which can send messages to subscribers such as email addresses.

Option B is incorrect because creating an AWS Batch job that forwards any resource type findings to an AWS Lambda function is not a suitable way to automate a response. AWS Batch is a service that enables you to run batch computing workloads on AWS. Batch is designed for large-scale and long-running jobs that can benefit from parallelization and dynamic provisioning of compute resources. Batch is not intended for event-driven and real-time workflows that require immediate response.

Option C is correct because creating an Amazon EventBridge event rule that matches active IAM Access Analyzer findings and invokes AWS Step Functions for resolution is a valid way to monitor and analyze the security incidents. Amazon EventBridge is a serverless event bus service that allows you to connect your applications with data from various sources. EventBridge can use rules to match events and route them to targets for processing. You can use EventBridge to invoke AWS Step Functions state machines from the IAM Access Analyzer findings.

Option D is incorrect because creating an Amazon CloudWatch metric filter that matches active IAM Access Analyzer findings and invokes AWS Batch for resolution is not a suitable way to monitor and analyze the security incidents. Amazon CloudWatch is a service that provides monitoring and observability for your AWS resources and applications. CloudWatch can collect metrics, logs, and events from various sources and perform actions based on alarms or filters. However, CloudWatch cannot directly invoke AWS Batch jobs from the IAM Access Analyzer findings. You would need to use another service such as EventBridge or SNS to trigger the Batch job.

Option E is incorrect because creating an Amazon SQS queue that forwards a notification to the security team that an external principal has been granted access to the specific IAM role and has been blocked is not a valid way to notify the security incidents. Amazon SQS is a fully managed message queue service that enables you to decouple and scale microservices, distributed systems, and serverless applications. SQS can deliver messages to consumers that poll the queue for messages. However, SQS cannot directly forward a notification to the security team's email addresses. You would need to use another service such as SNS or SES to send email notifications.

Option F is correct because creating an Amazon SNS topic for external or cross-account access notices and subscribing the security team's email addresses to the topic is a valid way to notify the security incidents. Amazon SNS is a fully managed messaging service that enables you to decouple and scale microservices, distributed systems, and serverless applications. SNS can deliver messages to a variety of endpoints, such as email, SMS, or HTTP. You can use SNS to send email notifications to the security team when a critical security finding is detected.

References:

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

**NEW QUESTION 6**

Company A has an AWS account that is named Account A. Company A recently acquired Company B, which has an AWS account that is named Account B. Company B stores its files in an Amazon S3 bucket. The administrators need to give a user from Account A full access to the S3 bucket in Account B. After the administrators adjust the IAM permissions for the user in Account A to access the S3 bucket in Account B, the user still cannot access any files in the S3 bucket. Which solution will resolve this issue?

- A. In Account B, create a bucket ACL to allow the user from Account A to access the S3 bucket in Account B.
- B. In Account B, create an object ACL to allow the user from Account A to access all the objects in the S3 bucket in Account B.
- C. In Account B, create a bucket policy to allow the user from Account A to access the S3 bucket in Account B.
- D. In Account B, create a user policy to allow the user from Account A to access the S3 bucket in Account B.

**Answer:** C

**Explanation:**

A bucket policy is a resource-based policy that defines permissions for a specific S3 bucket. It can be used to grant cross-account access to another AWS account or an IAM user or role in another account. A bucket policy can also specify which actions, resources, and conditions are allowed or denied.

A bucket ACL is an access control list that grants basic read or write permissions to predefined groups of users. It cannot be used to grant cross-account access to a specific IAM user or role in another account.

An object ACL is an access control list that grants basic read or write permissions to predefined groups of users for a specific object in an S3 bucket. It cannot be used to grant cross-account access to a specific IAM user or role in another account.

A user policy is an IAM policy that defines permissions for an IAM user or role in the same account. It cannot be used to grant cross-account access to another AWS account or an IAM user or role in another account.

For more information, see [Provide cross-account access to objects in Amazon S3 buckets](#) and [Example 2: Bucket owner granting cross-account bucket permissions](#).

**NEW QUESTION 7**

A company has two IAM accounts within IAM Organizations. In Account-1. Amazon EC2 Auto Scaling is launched using a service-linked role. In Account-2. Amazon EBS volumes are encrypted with an IAM KMS key. A Security Engineer needs to ensure that the service-linked role can launch instances with these encrypted volumes. Which combination of steps should the Security Engineer take in both accounts? (Select TWO.)

- A. Allow Account-1 to access the KMS key in Account-2 using a key policy
- B. Attach an IAM policy to the service-linked role in Account-1 that allows these actions `CreateGrant`, `DescribeKey`, `Encrypt`, `GenerateDataKey`, `Decrypt`, and `ReEncrypt`
- C. Create a KMS grant for the service-linked role with these actions `CreateGrant`, `DescribeKey`, `Encrypt`, `GenerateDataKey`, `Decrypt`, and `ReEncrypt`
- D. Attach an IAM policy to the role attached to the EC2 instances with KMS actions and then allow Account-1 in the KMS key policy.
- E. Attach an IAM policy to the user who is launching EC2 instances and allow the user to access the KMS key policy of Account-2.

**Answer:** CD

**Explanation:**

because these are the steps that can ensure that the service-linked role can launch instances with encrypted volumes. A service-linked role is a type of IAM role that is linked to an AWS service and allows the service to perform actions on your behalf. A KMS grant is a mechanism that allows you to delegate permissions to use a customer master key (CMK) to a principal such as a service-linked role. A KMS grant specifies the actions that the principal can perform, such as encrypting and decrypting data. By creating a KMS grant for the service-linked role with the specified actions, you can allow the service-linked role to use the CMK in Account-2 to launch instances with encrypted volumes. By attaching an IAM policy to the role attached to the EC2 instances with KMS actions and then allowing Account-1 in the KMS key policy, you can also enable cross-account access to the CMK and allow the EC2 instances to use the encrypted volumes. The other options are either incorrect or unnecessary for meeting the requirement.

**NEW QUESTION 8**

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

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

**Answer:** B

**Explanation:**

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

**NEW QUESTION 9**

A security engineer wants to use Amazon Simple Notification Service (Amazon SNS) to send email alerts to a company's security team for Amazon GuardDuty findings that have a High severity level. The security engineer also wants to deliver these findings to a visualization tool for further examination. Which solution will meet these requirements?

- A. Set up GuardDuty to send notifications to an Amazon CloudWatch alarm with two targets in CloudWatch
- B. From CloudWatch, stream the findings through Amazon Kinesis Data Streams into an Amazon OpenSearch Service domain as the first target for deliver
- C. Use Amazon QuickSight to visualize the finding
- D. Use OpenSearch queries for further analysis
- E. Deliver email alerts to the security team by configuring an SNS topic as a second target for the CloudWatch alarm



- F. Use event pattern matching with an Amazon EventBridge event rule to send only High severity findings in the alerts.
- G. Set up GuardDuty to send notifications to AWS CloudTrail with two targets in CloudTrail
- H. From CloudTrail, stream the findings through Amazon Kinesis Data Firehose into an Amazon OpenSearch Service domain as the first target for deliver
- I. Use OpenSearch Dashboards to visualize the finding
- J. Use OpenSearch queries for further analysis
- K. Deliver email alerts to the security team by configuring an SNS topic as a second target for CloudTrail
- L. Use event pattern matching with a CloudTrail event rule to send only High severity findings in the alerts.
- M. Set up GuardDuty to send notifications to Amazon EventBridge with two target
- N. From EventBridge, stream the findings through Amazon Kinesis Data Firehose into an Amazon OpenSearch Service domain as the first target for deliver
- O. Use OpenSearch Dashboards to visualize the finding
- P. Use OpenSearch queries for further analysis
- Q. Deliver email alerts to the security team by configuring an SNS topic as a second target for EventBridge
- R. Use event pattern matching with an EventBridge event rule to send only High severity findings in the alerts.
- S. Set up GuardDuty to send notifications to Amazon EventBridge with two target
- T. From EventBridge, stream the findings through Amazon Kinesis Data Streams into an Amazon OpenSearch Service domain as the first target for deliver
- . Use Amazon QuickSight to visualize the finding
- . Use OpenSearch queries for further analysis
- . Deliver email alerts to the security team by configuring an SNS topic as a second target for EventBridge
- . Use event pattern matching with an EventBridge event rule to send only High severity findings in the alerts.

**Answer:** C

#### NEW QUESTION 10

A Security Engineer is asked to update an AWS CloudTrail log file prefix for an existing trail. When attempting to save the change in the CloudTrail console, the Security Engineer receives the following error message: `There is a problem with the bucket policy.` What will enable the Security Engineer to save the change?

- A. Create a new trail with the updated log file prefix, and then delete the original trail
- B. Update the existing bucket policy in the Amazon S3 console with the new log file prefix, and then update the log file prefix in the CloudTrail console.
- C. Update the existing bucket policy in the Amazon S3 console to allow the Security Engineer's Principal to perform PutBucketPolicy, and then update the log file prefix in the CloudTrail console.
- D. Update the existing bucket policy in the Amazon S3 console with the new log file prefix, and then update the log file prefix in the CloudTrail console.
- E. Update the existing bucket policy in the Amazon S3 console to allow the Security Engineer's Principal to perform GetBucketPolicy, and then update the log file prefix in the CloudTrail console.

**Answer:** C

#### Explanation:

The correct answer is C. Update the existing bucket policy in the Amazon S3 console with the new log file prefix, and then update the log file prefix in the CloudTrail console.

According to the AWS documentation<sup>1</sup>, a bucket policy is a resource-based policy that you can use to grant access permissions to your Amazon S3 bucket and the objects in it. Only the bucket owner can associate a policy with a bucket. The permissions attached to the bucket apply to all of the objects in the bucket that are owned by the bucket owner.

When you create a trail in CloudTrail, you can specify an existing S3 bucket or create a new one to store your log files. CloudTrail automatically creates a bucket policy for your S3 bucket that grants CloudTrail write-only access to deliver log files to your bucket. The bucket policy also grants read-only access to AWS services that you can use to view and analyze your log data, such as Amazon Athena, Amazon CloudWatch Logs, and Amazon QuickSight.

If you want to update the log file prefix for an existing trail, you must also update the existing bucket policy in the S3 console with the new log file prefix. The log file prefix is part of the resource ARN that identifies the objects in your bucket that CloudTrail can access. If you don't update the bucket policy with the new log file prefix, CloudTrail will not be able to deliver log files to your bucket, and you will receive an error message when you try to save the change in the CloudTrail console.

The other options are incorrect because:

- A. Creating a new trail with the updated log file prefix, and then deleting the original trail is not necessary and may cause data loss or inconsistency. You can simply update the existing trail and its associated bucket policy with the new log file prefix.
- B. Updating the existing bucket policy in the S3 console to allow the Security Engineer's Principal to perform PutBucketPolicy is not relevant to this issue. The PutBucketPolicy action allows you to create or replace a policy on a bucket, but it does not affect CloudTrail's ability to deliver log files to your bucket. You still need to update the existing bucket policy with the new log file prefix.
- D. Updating the existing bucket policy in the S3 console to allow the Security Engineer's Principal to perform GetBucketPolicy is not relevant to this issue. The GetBucketPolicy action allows you to retrieve a policy on a bucket, but it does not affect CloudTrail's ability to deliver log files to your bucket. You still need to update the existing bucket policy with the new log file prefix.

References:

1: Using bucket policies - Amazon Simple Storage Service

#### NEW QUESTION 10

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 team
- B. Create a trail in AWS CloudTrail that has Amazon CloudWatch Logs turned on
- C. Use Amazon EventBridge to monitor local user activities.
- D. Create a break glass EC2 key pair for the AWS account
- E. Provide the key pair to the security team
- F. Use AWS CloudTrail to monitor key pair activities
- G. Send notifications to the security team by using Amazon Simple Notification Service (Amazon SNS).
- H. Create a break glass IAM role for the account
- I. Allow security team members to perform the AssumeRoleWithSAML operation
- J. Create an AWS CloudTrail trail that has Amazon CloudWatch Logs turned on
- 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 CloudTrail filter based on Session Manager.
- 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 14**

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

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

**Answer:** AD

**Explanation:**

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

**NEW QUESTION 18**

A company has a legacy application that runs on a single Amazon EC2 instance. A security audit shows that the application has been using an IAM access key within its code to access an Amazon S3 bucket that is named DOC-EXAMPLE-BUCKET1 in the same AWS account. This access key pair has the s3:GetObject permission to all objects in only this S3 bucket. The company takes the application offline because the application is not compliant with the company's security policies for accessing other AWS resources from Amazon EC2.

A security engineer validates that AWS CloudTrail is turned on in all AWS Regions. CloudTrail is sending logs to an S3 bucket that is named DOC-EXAMPLE-BUCKET2. This S3 bucket is in the same AWS account as DOC-EXAMPLE-BUCKET1. However, CloudTrail has not been configured to send logs to Amazon CloudWatch Logs.

The company wants to know if any objects in DOC-EXAMPLE-BUCKET1 were accessed with the IAM access key in the past 60 days. If any objects were accessed, the company wants to know if any of the objects that are text files (.txt extension) contained personally identifiable information (PII).

Which combination of steps should the security engineer take to gather this information? (Choose two.)

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

**Answer:** AD

**NEW QUESTION 20**

A company is attempting to conduct forensic analysis on an Amazon EC2 instance, but the company is unable to connect to the instance by using AWS Systems Manager Session Manager. The company has installed AWS Systems Manager Agent (SSM Agent) on the EC2 instance.

The EC2 instance is in a subnet in a VPC that does not have an internet gateway attached. The company has associated a security group with the EC2 instance. The security group does not have inbound or outbound rules. The subnet's network ACL allows all inbound and outbound traffic.

Which combination of actions will allow the company to conduct forensic analysis on the EC2 instance without compromising forensic data? (Select THREE.)

- A. Update the EC2 instance security group to add a rule that allows outbound traffic on port 443 for 0.0.0.0/0.

- B. Update the EC2 instance security group to add a rule that allows inbound traffic on port 443 to the VPC's CIDR range.
- C. Create an EC2 key pair
- D. Associate the key pair with the EC2 instance.
- E. Create a VPC interface endpoint for Systems Manager in the VPC where the EC2 instance is located.
- F. Attach a security group to the VPC interface endpoint
- G. Allow inbound traffic on port 443 to the VPC's CIDR range.
- H. Create a VPC interface endpoint for the EC2 instance in the VPC where the EC2 instance is located.

**Answer:** BCF

#### NEW QUESTION 24

A Security Engineer receives alerts that an Amazon EC2 instance on a public subnet is under an SFTP brute force attack from a specific IP address, which is a known malicious bot. What should the Security Engineer do to block the malicious bot?

- A. Add a deny rule to the public VPC security group to block the malicious IP
- B. Add the malicious IP to IAM WAF backhsted IPs
- C. Configure Linux iptables or Windows Firewall to block any traffic from the malicious IP
- D. Modify the hosted zone in Amazon Route 53 and create a DNS sinkhole for the malicious IP

**Answer:** D

#### Explanation:

what the Security Engineer should do to block the malicious bot. SFTP is a protocol that allows secure file transfer over SSH. EC2 is a service that provides virtual servers in the cloud. A public subnet is a subnet that has a route to an internet gateway, which allows it to communicate with the internet. A brute force attack is a type of attack that tries to guess passwords or keys by trying many possible combinations. A malicious bot is a software program that performs automated tasks for malicious purposes. Route 53 is a service that provides DNS resolution and domain name registration. A DNS sinkhole is a technique that redirects malicious or unwanted traffic to a different destination, such as a black hole server or a honeypot. By modifying the hosted zone in Route 53 and creating a DNS sinkhole for the malicious IP, the Security Engineer can block the malicious bot from reaching the EC2 instance on the public subnet. The other options are either ineffective or inappropriate for blocking the malicious bot.

#### NEW QUESTION 26

A security engineer must troubleshoot an administrator's inability to make an existing Amazon S3 bucket public in an account that is part of an organization n IAM Organizations. The administrator switched the role from the master account to a member account and then attempted to make one S3 bucket public. This action was immediately denied

Which actions should the security engineer take to troubleshoot the permissions issue? (Select TWO.)

- A. Review the cross-account role permissions and the S3 bucket policy Verify that the Amazon S3 block public access option in the member account is deactivated.
- B. Review the role permissions m the master account and ensure it has sufficient privileges to perform S3 operations
- C. Filter IAM CloudTrail logs for the master account to find the original deny event and update the cross-account role m the member account accordingly Verify that the Amazon S3 block public access option in the master account is deactivated.
- D. Evaluate the SCPs covering the member account and the permissions boundary of the role in the member account for missing permissions and explicit denies.
- E. Ensure the S3 bucket policy explicitly allows the s3 PutBucketPublicAccess action for the role m the member account

**Answer:** DE

#### Explanation:

- A is incorrect because reviewing the cross-account role permissions and the S3 bucket policy is not enough to troubleshoot the permissions issue. You also need to verify that the Amazon S3 block public access option in the member account is deactivated, as well as the permissions boundary and the SCPs of the role in the member account.
- D is correct because evaluating the SCPs and the permissions boundary of the role in the member account can help you identify any missing permissions or explicit denies that could prevent the administrator from making the S3 bucket public.
- E is correct because ensuring that the S3 bucket policy explicitly allows the s3 PutBucketPublicAccess action for the role in the member account can help you override any block public access settings that could prevent the administrator from making the S3 bucket public.

#### NEW QUESTION 29

A company uses AWS Organizations to manage a small number of AWS accounts. However, the company plans to add 1 000 more accounts soon. The company allows only a centralized security team to create IAM roles for all AWS accounts and teams. Application teams submit requests for IAM roles to the security team. The security team has a backlog of IAM role requests and cannot review and provision the IAM roles quickly.

The security team must create a process that will allow application teams to provision their own IAM roles. The process must also limit the scope of IAM roles and prevent privilege escalation.

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

- A. Create an IAM group for each application tea
- B. Associate policies with each IAM grou
- C. Provision IAM users for each application team membe
- D. Add the new IAM users to the appropriate IAM group by using role-based access control (RBAC).
- E. Delegate application team leads to provision IAM rotes for each tea
- F. Conduct a quarterly review of the IAM rotes the team leads have provisione
- G. Ensure that the application team leads have the appropriate training to review IAM roles.
- H. Put each AWS account in its own O
- I. Add an SCP to each OU to grant access to only the AWS services that the teams plan to us
- J. Include conditions tn the AWS account of each team.
- K. Create an SCP and a permissions boundary for IAM role
- L. Add the SCP to the root OU so that only roles that have the permissions boundary attached can create any new IAM roles.

**Answer:** D

#### Explanation:



To create a process that will allow application teams to provision their own IAM roles, while limiting the scope of IAM roles and preventing privilege escalation, the following steps are required:

- Create a service control policy (SCP) that defines the maximum permissions that can be granted to any IAM role in the organization. An SCP is a type of policy that you can use with AWS Organizations to manage permissions for all accounts in your organization. SCPs restrict permissions for entities in member accounts, including each AWS account root user, IAM users, and roles. For more information, see [Service control policies overview](#).
- Create a permissions boundary for IAM roles that matches the SCP. A permissions boundary is an advanced feature for using a managed policy to set the maximum permissions that an identity-based policy can grant to an IAM entity. A permissions boundary allows an entity to perform only the actions that are allowed by both its identity-based policies and its permissions boundaries. For more information, see [Permissions boundaries for IAM entities](#).
- Add the SCP to the root organizational unit (OU) so that it applies to all accounts in the organization.

This will ensure that no IAM role can exceed the permissions defined by the SCP, regardless of how it is created or modified.

- Instruct the application teams to attach the permissions boundary to any IAM role they create. This will prevent them from creating IAM roles that can escalate their own privileges or access resources they are not authorized to access.

This solution will meet the requirements with the least operational overhead, as it leverages AWS Organizations and IAM features to delegate and limit IAM role creation without requiring manual reviews or approvals.

The other options are incorrect because they either do not allow application teams to provision their own IAM roles (A), do not limit the scope of IAM roles or prevent privilege escalation (B), or do not take advantage of managed services whenever possible ©.

Verified References:

- [https://docs.aws.amazon.com/IAM/latest/UserGuide/access\\_policies\\_boundaries.html](https://docs.aws.amazon.com/IAM/latest/UserGuide/access_policies_boundaries.html)

### NEW QUESTION 32

A security engineer is configuring a mechanism to send an alert when three or more failed sign-in attempts to the AWS Management Console occur during a 5-minute period. The security engineer creates a trail in AWS CloudTrail to assist in this work.

Which solution will meet these requirements?

- A. In CloudTrail, turn on Insights events on the trail
- B. Configure an alarm on the insight with eventName matching ConsoleLogin and errorMessage matching "Failed authentication". Configure a threshold of 3 and a period of 5 minutes.
- C. Configure CloudTrail to send events to Amazon CloudWatch Log
- D. Create a metric filter for the relevant log group
- E. Create a filter pattern with eventName matching ConsoleLogin and errorMessage matching "Failed authentication". Create a CloudWatch alarm with a threshold of 3 and a period of 5 minutes.
- F. Create an Amazon Athena table from the CloudTrail event
- G. Run a query for eventName matching ConsoleLogin and for errorMessage matching "Failed authentication". Create a notification action from the query to send an Amazon Simple Notification Service (Amazon SNS) notification when the count equals 3 within a period of 5 minutes.
- H. In AWS Identity and Access Management Access Analyzer, create a new analyzer
- I. Configure the analyzer to send an Amazon Simple Notification Service (Amazon SNS) notification when a failed sign-in event occurs 3 times for any IAM user within a period of 5 minutes.

**Answer: B**

#### Explanation:

The correct answer is B. Configure CloudTrail to send events to Amazon CloudWatch Logs. Create a metric filter for the relevant log group. Create a filter pattern with eventName matching ConsoleLogin and errorMessage matching "Failed authentication". Create a CloudWatch alarm with a threshold of 3 and a period of 5 minutes.

This answer is correct because it meets the requirements of sending an alert when three or more failed sign-in attempts to the AWS Management Console occur during a 5-minute period. By configuring CloudTrail to send events to CloudWatch Logs, the security engineer can create a metric filter that matches the desired pattern of failed sign-in events. Then, by creating a CloudWatch alarm based on the metric filter, the security engineer can set a threshold of 3 and a period of 5 minutes, and choose an action such as sending an email or an Amazon Simple Notification Service (Amazon SNS) message when the alarm is triggered<sup>12</sup>.

The other options are incorrect because:

- A. Turning on Insights events on the trail and configuring an alarm on the insight is not a solution, because Insights events are used to analyze unusual activity in management events, such as spikes in API call volume or error rates. Insights events do not capture failed sign-in attempts to the AWS Management Console<sup>3</sup>.
- C. Creating an Amazon Athena table from the CloudTrail events and running a query for failed sign-in events is not a solution, because it does not provide a mechanism to send an alert based on the query results. Amazon Athena is an interactive query service that allows analyzing data in Amazon S3 using standard SQL, but it does not support creating notifications or alarms from queries<sup>4</sup>.
- D. Creating an analyzer in AWS Identity and Access Management Access Analyzer and configuring it to send an Amazon SNS notification when a failed sign-in event occurs 3 times for any IAM user within a period of 5 minutes is not a solution, because IAM Access Analyzer is not a service that monitors sign-in events, but a service that helps identify resources that are shared with external entities. IAM Access Analyzer does not generate findings for failed sign-in attempts to the AWS Management Console<sup>5</sup>.

References:

1: Sending CloudTrail Events to CloudWatch Logs - AWS CloudTrail 2: Creating Alarms Based on Metric Filters - Amazon CloudWatch 3: Analyzing unusual activity in management events - AWS CloudTrail 4: What is Amazon Athena? - Amazon Athena 5: Using AWS Identity and Access Management Access Analyzer - AWS Identity and Access Management

### NEW QUESTION 35

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.

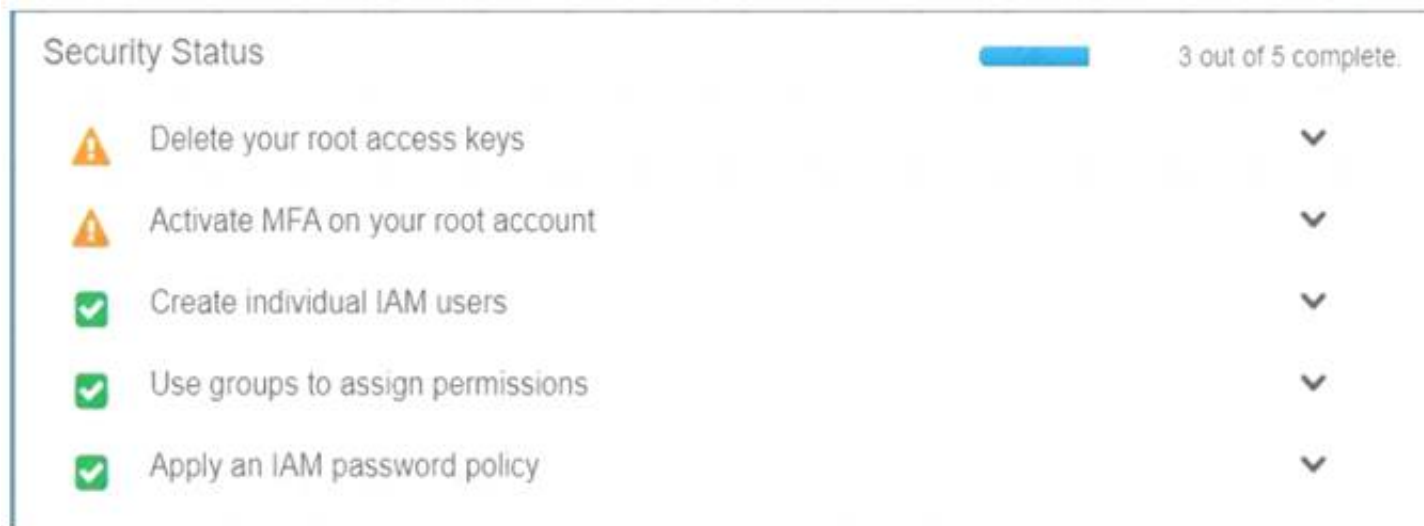
**Answer: C**

#### 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/id\\_credentials\\_mfa.html](http://docs.IAM.amazon.com/IAM/latest/UserGuide/id_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 39

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. "Bool" : { "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 44

Your company is planning on using bastion hosts for administering the servers in IAM. Which of the following is the best description of a bastion host from a security perspective?

Please select:

- A. A Bastion host should be on a private subnet and never a public subnet due to security concerns
- B. A Bastion host sits on the outside of an internal network and is used as a gateway into the private network and is considered the critical strong point of the network
- C. Bastion hosts allow users to log in using RDP or SSH and use that session to SSH into internal network to access private subnet resources.
- D. A Bastion host should maintain extremely tight security and monitoring as it is available to the public

**Answer: C**

**Explanation:**

A bastion host is a special purpose computer on a network specifically designed and configured to withstand attacks. The computer generally hosts a single application, for example a proxy server, and all other services are removed or limited to reduce the threat to the computer.

In IAM, A bastion host is kept on a public subnet. Users log on to the bastion host via SSH or RDP and then use that session to manage other hosts in the private subnets.

Options A and B are invalid because the bastion host needs to sit on the public network. Option D is invalid because bastion hosts are not used for monitoring. For more information on bastion hosts, just browse to the below URL:

<https://docs.IAM.amazon.com/quickstart/latest/linux-bastion/architecture.html>

The correct answer is: Bastion hosts allow users to log in using RDP or SSH and use that session to SSH into internal network to access private subnet resources. Submit your Feedback/Queries to our Experts

**NEW QUESTION 49**

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

How can the security engineer implement this solution?

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

**Answer: C**

**NEW QUESTION 52**

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 54**

A company wants to remove all SSH keys permanently from a specific subset of its Amazon Linux 2 Amazon EC2 instances that are using the same IAM instance profile. However, three individuals who have IAM user accounts will need to access these instances by using an SSH session to perform critical duties.

How can a security engineer provide the access to meet these requirements?

- A. Assign an IAM policy to the instance profile to allow the EC2 instances to be managed by AWS Systems Manager. Provide the IAM user accounts with permission to use Systems Manager. Remove the SSH keys from the EC2 instances. Use Systems Manager Inventory to select the EC2 instance and connect.
- B. Assign an IAM policy to the IAM user accounts to provide permission to use AWS Systems Manager. Run Command. Remove the SSH keys from the EC2 instances. Use Run Command to open an SSH connection to the EC2 instance.
- C. Assign an IAM policy to the instance profile to allow the EC2 instances to be managed by AWS Systems Manager. Provide the IAM user accounts with permission to use Systems Manager. Remove the SSH keys from the EC2 instances. Use Systems Manager Session Manager to select the EC2 instance and connect.
- D. Assign an IAM policy to the IAM user accounts to provide permission to use the EC2 service in the AWS Management Console. Remove the SSH keys from the EC2 instances. Connect to the EC2 instance as the ec2-user through the AWS Management Console's EC2 SSH client method.

**Answer: C**

**Explanation:**

To provide access to the three individuals who have IAM user accounts to access the Amazon Linux 2 Amazon EC2 instances that are using the same IAM instance profile, the most appropriate solution would be to assign an IAM policy to the instance profile to allow the EC2 instances to be managed by AWS Systems Manager, provide the IAM user accounts with permission to use Systems Manager, remove the SSH keys from the EC2 instances, and use Systems Manager Session Manager to select the EC2 instance and connect.

References: : AWS Systems Manager Session Manager - AWS Systems Manager : AWS Systems Manager AWS Management Console : AWS Identity and Access Management - AWS Management Console : Amazon Elastic Compute Cloud - Amazon Web Services : Amazon Linux 2 - Amazon Web Services : AWS Systems Manager - AWS Management Console : AWS Systems Manager - AWS Management Console : AWS Systems Manager - AWS Management Console

**NEW QUESTION 57**

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

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

**Answer: C**

**Explanation:**

To ensure that the EC2 instances are logged, the security engineer should do the following:

➤ Use AWS DNS resolvers for all EC2 instances. This allows the security engineer to use Amazon-provided DNS servers that resolve public DNS hostnames to private IP addresses within their VPC, and that log DNS queries in Amazon CloudWatch Logs.

**NEW QUESTION 60**

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 62**

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 64**

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

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



**Answer:** B

**Explanation:**

The fastest way to identify the federated user who terminated a production Amazon EC2 instance is to filter the IAM CloudTrail event history for the `TerminateInstances` event and identify the assumed IAM role. Then, review the `AssumeRoleWithSAML` event call in CloudTrail to identify the corresponding username. This method does not require any additional tools or queries, and it directly links the IAM role with the federated user.

Option A is incorrect because the role session name may not be the same as the federated user name, and it may not be unique or descriptive enough to identify the user.

Option C is incorrect because the IAM Access Advisor tab only shows when a role was last accessed, not by whom or for what purpose. It also does not show the specific time of access, only the date.

Option D is incorrect because using Amazon Athena to run SQL queries on the IAM CloudTrail logs is not the fastest way to identify the federated user, as it requires creating a table schema and running multiple queries. It also assumes that the federation is done using web identity providers, not SAML providers, as indicated by the `AssumeRoleWithWebIdentity` event.

References:

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

**NEW QUESTION 68**

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 70**

A Security Engineer is troubleshooting an issue with a company's custom logging application. The application logs are written to an Amazon S3 bucket with event notifications enabled to send events to an Amazon SNS topic. All logs are encrypted at rest using an IAM KMS CMK. The SNS topic is subscribed to an encrypted Amazon SQS queue. The logging application polls the queue for new messages that contain metadata about the S3 object. The application then reads the content of the object from the S3 bucket for indexing.

The Logging team reported that Amazon CloudWatch metrics for the number of messages sent or received is showing zero. No logs are being received.

What should the Security Engineer do to troubleshoot this issue?

A) Add the following statement to the IAM managed CMKs:

```
{
  "Sid": "Allow Amazon SNS to use this key",
  "Effect": "Allow",
  "Principal": {
    "Service": ["sns.amazonaws.com", "sqs.amazonaws.com", "s3.amazonaws.com"]
  },
  "Action": [
    "kms:Decrypt",
    "kms:GenerateDataKey*"
  ],
  "Resource": "*"
}
```

B)

Add the following statement to the CMK key policy:

```
{
  "Sid": "Allow Amazon SNS to use this key",
  "Effect": "Allow",
  "Principal": {
    "Service": "sns.amazonaws.com"
  },
  "Action": [
    "kms:Decrypt",
    "kms:GenerateDataKey*"
  ],
  "Resource": "*"
}
```

C)

Add the following statement to the CMK key policy:

```
{
  "Sid": "Allow Amazon SNS to use this key",
  "Effect": "Allow",
  "Principal": {
    "Service": "sns.amazonaws.com"
  },
  "Action": [
    "kms:Decrypt",
    "kms:GenerateDataKey*"
  ],
  "Resource": "*"
}
```

D)

Add the following statement to the CMK key policy:

```
{
  "Sid": "Allow Amazon SNS to use this key",
  "Effect": "Allow",
  "Principal": {
    "Service": "s3.amazonaws.com"
  },
  "Action": [
    "kms:Decrypt",
    "kms:GenerateDataKey*"
  ],
  "Resource": "*"
}
```

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

**Answer: D**

#### NEW QUESTION 75

A company is running an application in The eu-west-1 Region. The application uses an IAM Key Management Service (IAM KMS) CMK to encrypt sensitive data. The company plans to deploy the application in the eu-north-1 Region.

A security engineer needs to implement a key management solution for the application deployment in the new Region. The security engineer must minimize changes to the application code.

Which change should the security engineer make to the IAM KMS configuration to meet these requirements?

- A. Update the key policies in eu-west-1. Point the application in eu-north-1 to use the same CMK as the application in eu-west-1.
- B. Allocate a new CMK to eu-north-1 to be used by the application that is deployed in that Region.
- C. Allocate a new CMK to eu-north-1. Create the same alias name for both key
- D. Configure the application deployment to use the key alias.
- E. Allocate a new CMK to eu-north-1. Create an alias for eu-'-1. Change the application code to point to the alias for eu-'-1.

**Answer: B**

#### NEW QUESTION 78

A security engineer receives a notice from the AWS Abuse team about suspicious activity from a Linux-based Amazon EC2 instance that uses Amazon Elastic Block Store (Amazon EBS)-based storage. The instance is making connections to known malicious addresses.

The instance is in a development account within a VPC that is in the us-east-1 Region. The VPC contains an internet gateway and has a subnet in us-east-1a and us-east-1b. Each subnet is associated with a route table that uses the internet gateway as a default route. Each subnet also uses the default network ACL. The suspicious EC2 instance runs within the us-east-1b subnet. During an initial investigation, a security engineer discovers that the suspicious instance is the only instance that runs in the subnet.

Which response will immediately mitigate the attack and help investigate the root cause?

- A. Log in to the suspicious instance and use the netstat command to identify remote connections. Use the IP addresses from these remote connections to create deny rules in the security group of the instance. Install diagnostic tools on the instance for investigation. Update the outbound network ACL for the subnet in us-east-1b to explicitly deny all connections as the first rule during the investigation of the instance.
- B. Update the outbound network ACL for the subnet in us-east-1b to explicitly deny all connections as the first rule. Replace the security group with a new security group that allows connections only from a diagnostics security group. Update the outbound network ACL for the us-east-1b subnet to remove the deny all rule. Launch a new EC2 instance that has diagnostic tools. Assign the new security group to the new EC2 instance. Use the new EC2 instance to investigate the suspicious instance.
- C. Ensure that the Amazon Elastic Block Store (Amazon EBS) volumes that are attached to the suspicious EC2 instance will not delete upon termination. Terminate the instance. Launch a new EC2 instance in us-east-1a that has diagnostic tools. Mount the EBS volumes from the terminated instance for investigation.
- D. Create an AWS WAF web ACL that denies traffic to and from the suspicious instance. Attach the AWS WAF web ACL to the instance to mitigate the attack. Log in to the instance and install diagnostic tools to investigate the instance.

**Answer: B**

#### Explanation:

This option suggests updating the outbound network ACL for the subnet in us-east-1b to explicitly deny all connections as the first rule, replacing the security group with a new one that only allows connections from a diagnostics security group, and launching a new EC2 instance with diagnostic tools to investigate the suspicious instance. This option will immediately mitigate the attack and provide the necessary tools for investigation.

**NEW QUESTION 80**

A company purchased a subscription to a third-party cloud security scanning solution that integrates with AWS Security Hub. A security engineer needs to implement a solution that will remediate the findings from the third-party scanning solution automatically. Which solution will meet this requirement?

- A. Set up an Amazon EventBridge rule that reacts to new Security Hub find-ing
- B. Configure an AWS Lambda function as the target for the rule to reme-diate the findings.
- C. Set up a custom action in Security Hu
- D. Configure the custom action to call AWS Systems Manager Automation runbooks to remediate the findings.
- E. Set up a custom action in Security Hu
- F. Configure an AWS Lambda function as the target for the custom action to remediate the findings.
- G. Set up AWS Config rules to use AWS Systems Manager Automation runbooks to remediate the findings.

**Answer:** A

**NEW QUESTION 83**

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 86**

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 toward 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 88**

A team is using AWS Secrets Manager to store an application database password. Only a limited number of IAM principals within the account can have access to the secret. The principals who require access to the secret change frequently. A security engineer must create a solution that maximizes flexibility and scalability. Which solution will meet these requirements?

- A. Use a role-based approach by creating an IAM role with an inline permissions policy that allows access to the secre
- B. Update the IAM principals in the role trust policy as required.
- C. Deploy a VPC endpoint for Secrets Manage
- D. Create and attach an endpoint policy that specifies the IAM principals that are allowed to access the secre
- E. Update the list of IAM principals as required.
- F. Use a tag-based approach by attaching a resource policy to the secre
- G. Apply tags to the secret and the IAM principal
- H. Use the aws:PrincipalTag and aws:ResourceTag IAM condition keys to control access.
- I. Use a deny-by-default approach by using IAM policies to deny access to the secret explicitl
- J. Attach the policies to an IAM grou
- K. Add all IAM principals to the IAM grou
- L. Remove principals from the group when they need acces
- M. Add the principals to the group again when access is no longer allowed.

**Answer:** C

**NEW QUESTION 91**

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 VP
- 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 endpoin
- 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 95**

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 access
- E. Create an AWS WAF web ACL and add an IP set rule
- 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 rule
- J. Associate the web ACL with the CloudFront distribution.

**Answer:** B

**NEW QUESTION 96**

A company is running an Amazon RDS for MySQL DB instance in a VPC. The VPC must not send or receive network traffic through the internet. A security engineer wants to use AWS Secrets Manager to rotate the DB instance credentials automatically. Because of a security policy, the security engineer cannot use the standard AWS Lambda function that Secrets Manager provides to rotate the credentials. The security engineer deploys a custom Lambda function in the VPC. The custom Lambda function will be responsible for rotating the secret in Secrets Manager. The security engineer edits the DB instance's security group to allow connections from this function. When the function is invoked, the function cannot communicate with Secrets Manager to rotate the secret properly. What should the security engineer do so that the function can rotate the secret?

- A. Add an egress-only internet gateway to the VPC
- B. Allow only the Lambda function's subnet to route traffic through the egress-only internet gateway.
- C. Add a NAT gateway to the VPC
- D. Configure only the Lambda function's subnet with a default route through the NAT gateway.
- E. Configure a VPC peering connection to the default VPC for Secrets Manager
- F. Configure the Lambda function's subnet to use the peering connection for routes.
- G. Configure a Secrets Manager interface VPC endpoint
- H. Include the Lambda function's private subnet during the configuration process.

**Answer:** D

**Explanation:**

You can establish a private connection between your VPC and Secrets Manager by creating an interface VPC endpoint. Interface endpoints are powered by AWS PrivateLink, a technology that enables you to privately access Secrets Manager APIs without an internet gateway, NAT device, VPN connection, or AWS Direct Connect connection. Reference:

<https://docs.aws.amazon.com/secretsmanager/latest/userguide/vpc-endpoint-overview.html>

The correct answer is D. Configure a Secrets Manager interface VPC endpoint. Include the Lambda function's private subnet during the configuration process. A Secrets Manager interface VPC endpoint is a private connection between the VPC and Secrets Manager that does not require an internet gateway, NAT device, VPN connection, or AWS Direct Connect connection<sup>1</sup>. By configuring a Secrets Manager interface VPC endpoint, the security engineer can enable the custom Lambda function to communicate with Secrets Manager without sending or receiving network traffic through the internet. The security engineer must include the Lambda function's private subnet during the configuration process to allow the function to use the endpoint<sup>2</sup>.

The other options are incorrect for the following reasons:

- A. An egress-only internet gateway is a VPC component that allows outbound communication over IPv6 from instances in the VPC to the internet, and prevents the internet from initiating an IPv6 connection with the instances<sup>3</sup>. However, this option does not meet the requirement that the VPC must not send or receive network traffic through the internet. Moreover, an egress-only internet gateway is for use with IPv6 traffic only, and Secrets Manager does not support IPv6 addresses<sup>2</sup>.
- B. A NAT gateway is a VPC component that enables instances in a private subnet to connect to the internet or other AWS services, but prevents the internet from initiating connections with those instances<sup>4</sup>. However, this option does not meet the requirement that the VPC must not send or receive network traffic through the internet. Additionally, a NAT gateway requires an elastic IP address, which is a public IPv4 address<sup>4</sup>.
- C. A VPC peering connection is a networking connection between two VPCs that enables you to route traffic between them using private IPv4 addresses or IPv6 addresses<sup>5</sup>. However, this option does not work because Secrets Manager does not have a default VPC that can be peered with. Furthermore, a VPC peering connection does not provide a private connection to Secrets Manager APIs without an internet gateway or other devices<sup>2</sup>.

**NEW QUESTION 101**

During a manual review of system logs from an Amazon Linux EC2 instance, a Security Engineer noticed that there are sudo commands that were never properly alerted or reported on the Amazon CloudWatch Logs agent. Why were there no alerts on the sudo commands?

- A. There is a security group blocking outbound port 80 traffic that is preventing the agent from sending the logs
- B. The IAM instance profile on the EC2 instance was not properly configured to allow the CloudWatchLogs agent to push the logs to CloudWatch
- C. CloudWatch Logs status is set to ON versus SECURE, which prevents it from pulling in OS security event logs

D. The VPC requires that all traffic go through a proxy, and the CloudWatch Logs agent does not support a proxy configuration.

**Answer:** B

**Explanation:**

the reason why there were no alerts on the sudo commands. Sudo commands are commands that allow a user to execute commands as another user, usually the superuser or root. CloudWatch Logs agent is a software agent that can send log data from an EC2 instance to CloudWatch Logs, a service that monitors and stores log data. The CloudWatch Logs agent needs an IAM instance profile, which is a container for an IAM role that allows applications running on an EC2 instance to make API requests to AWS services. If the IAM instance profile on the EC2 instance was not properly configured to allow the CloudWatch Logs agent to push the logs to CloudWatch, then there would be no alerts on the sudo commands. The other options are either irrelevant or invalid for explaining why there were no alerts on the sudo commands.

**NEW QUESTION 105**

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 Towe
- 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 tabl
- C. Create an SCP that denies the CreateInternetGateway actio
- D. Attach the SCP to all accounts except the security inspection account.
- E. Create a centrally managed VPC in the security inspection accoun
- F. Establish VPC peering connections between the security inspection account and other account
- G. Instruct account owners to create default routes in their account route tables that point to the VPC pee
- H. Create an SCP that denies theAttach InternetGateway actio
- I. Attach the SCP to all accounts except the security inspection account.
- J. Use IAM Control Towe
- K. Modify the default Account Factory networking template to automatically associate new accounts with a centrally managed transitgateway 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 107**

A company has thousands of AWS Lambda functions. While reviewing the Lambda functions, a security engineer discovers that sensitive information is being stored in environment variables and is viewable as plaintext in the Lambda console. The values of the sensitive information are only a few characters long.

What is the MOST cost-effective way to address this security issue?

- A. Set up IAM policies from the Lambda console to hide access to the environment variables.
- B. Use AWS Step Functions to store the environment variable
- C. Access the environment variables at runtime
- D. Use IAM permissions to restrict access to the environment variables to only the Lambda functions that require access.
- E. Store the environment variables in AWS Secrets Manager, and access them at runtime
- F. Use IAM permissions to restrict access to the secrets to only the Lambda functions that require access.
- G. Store the environment variables in AWS Systems Manager Parameter Store as secure string parameters, and access them at runtime
- H. Use IAM permissions to restrict access to the parameters to only the Lambda functions that require access.

**Answer:** D

**Explanation:**

Storing sensitive information in environment variables is not a secure practice, as anyone who has access to the Lambda console or the Lambda function code can view them as plaintext. To address this security issue, the security engineer needs to use a service that can store and encrypt the environment variables, and access them at runtime using IAM permissions. The most cost-effective way to do this is to use AWS Systems Manager Parameter Store, which is a service that provides secure, hierarchical storage for configuration data management and secrets management. Parameter Store allows you to store values as standard parameters (plaintext) or secure string parameters (encrypted). Secure string parameters use a AWS Key Management Service (AWS KMS) customer master key (CMK) to encrypt the parameter value. To access the parameter value at runtime, the Lambda function needs to have IAM permissions to decrypt the parameter using the KMS CMK.

The other options are incorrect because:

- Option A is incorrect because setting up IAM policies from the Lambda console to hide access to the environment variables will not prevent someone who has access to the Lambda function code from viewing them as plaintext. IAM policies can only control who can perform actions on AWS resources, not what they can see in the code or the console.
- Option B is incorrect because using AWS Step Functions to store the environment variables is not a secure or cost-effective solution. AWS Step Functions is a service that lets you coordinate multiple AWS services into serverless workflows. Step Functions does not provide any encryption or secrets management capabilities, and it will incur additional charges for each state transition in the workflow. Moreover, storing environment variables in Step Functions will make them visible in the execution history of the workflow, which can be accessed by anyone who has permission to view the Step Functions console or API.
- Option C is incorrect because storing the environment variables in AWS Secrets Manager and accessing them at runtime is not a cost-effective solution. AWS Secrets Manager is a service that helps you protect secrets needed to access your applications, services, and IT resources. Secrets Manager enables you to rotate, manage, and retrieve secrets throughout their lifecycle. While Secrets Manager can securely store and encrypt environment variables using KMS CMKs, it will incur higher charges than Parameter Store for storing and retrieving secrets. Unless the security engineer needs the advanced features of Secrets Manager, such as automatic rotation of secrets or integration with other AWS services, Parameter Store is a cheaper and simpler option.

**NEW QUESTION 111**

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 115**

A company has launched an Amazon EC2 instance with an Amazon Elastic Block Store (Amazon EBS) volume in the us-east-1 Region. The volume is encrypted with an AWS Key Management Service (AWS KMS) customer managed key that the company's security team created. The security team has created an IAM key policy and has assigned the policy to the key. The security team has also created an IAM instance profile and has assigned the profile to the instance. The EC2 instance will not start and transitions from the pending state to the shutting-down state to the terminated state. Which combination of steps should a security engineer take to troubleshoot this issue? (Select TWO)

- A. Verify that the KMS key policy specifies a deny statement that prevents access to the key by using the aws:SourceIP condition key. Check that the range includes the EC2 instance IP address that is associated with the EBS volume.
- B. Verify that the KMS key that is associated with the EBS volume is set to the Symmetric key type.
- C. Verify that the KMS key that is associated with the EBS volume is in the Enabled state.
- D. Verify that the EC2 role that is associated with the instance profile has the correct IAM instance policy to launch an EC2 instance with the EBS volume.
- E. Verify that the key that is associated with the EBS volume has not expired and needs to be rotated.

**Answer: CD**

**Explanation:**

To troubleshoot the issue of an EC2 instance failing to start and transitioning to a terminated state when it has an EBS volume encrypted with an AWS KMS customer managed key, a security engineer should take the following steps:

\* C. Verify that the KMS key that is associated with the EBS volume is in the Enabled state. If the key is not enabled, it will not function properly and could cause the EC2 instance to fail.

\* D. Verify that the EC2 role that is associated with the instance profile has the correct IAM instance policy to launch an EC2 instance with the EBS volume. If the instance does not have the necessary permissions, it may not be able to mount the volume and could cause the instance to fail.

Therefore, options C and D are the correct answers.

**NEW QUESTION 119**

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 123**

A company maintains an open-source application that is hosted on a public GitHub repository. While creating a new commit to the repository, an engineer uploaded their IAM access key and secret access key. The engineer reported the mistake to a manager, and the manager immediately disabled the access key. The company needs to assess the impact of the exposed access key. A security engineer must recommend a solution that requires the least possible managerial overhead. Which solution meets these requirements?

- A. Analyze an IAM Identity and Access Management (IAM) use report from IAM Trusted Advisor to see when the access key was last used.
- B. Analyze Amazon CloudWatch Logs for activity by searching for the access key.
- C. Analyze VPC flow logs for activity by searching for the access key.
- D. Analyze a credential report in IAM Identity and Access Management (IAM) to see when the access key was last used.

**Answer: A**

**Explanation:**

To assess the impact of the exposed access key, the security engineer should recommend the following solution:

➤ Analyze an IAM use report from AWS Trusted Advisor to see when the access key was last used. This allows the security engineer to use a tool that provides information about IAM entities and credentials in their account, and check if there was any unauthorized activity with the exposed access key.



#### NEW QUESTION 128

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 Systems 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. 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.
- D. 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.
- E. 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

A security engineer is working with a company to design an ecommerce application. The application will run on Amazon EC2 instances that run in an Auto Scaling group behind an Application Load Balancer (ALB). The application will use an Amazon RDS DB instance for its database. The only required connectivity from the internet is for HTTP and HTTPS traffic to the application. The application must communicate with an external payment provider that allows traffic only from a preconfigured allow list of IP addresses. The company must ensure that communications with the external payment provider are not interrupted as the environment scales.

Which combination of actions should the security engineer recommend to meet these requirements? (Select THREE.)

- A. Deploy a NAT gateway in each private subnet for every Availability Zone that is in use.
- B. Place the DB instance in a public subnet.
- C. Place the DB instance in a private subnet.
- D. Configure the Auto Scaling group to place the EC2 instances in a public subnet.
- E. Configure the Auto Scaling group to place the EC2 instances in a private subnet.
- F. Deploy the ALB in a private subnet.

**Answer:** ACE

#### NEW QUESTION 131

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 "s3: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>  
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#### NEW QUESTION 133

A company's IAM account consists of approximately 300 IAM users. Now there is a mandate that an access change is required for 100 IAM users to have unlimited privileges to S3. As a system administrator, how can you implement this effectively so that there is no need to apply the policy at the individual user level? Please select:

- A. Create a new role and add each user to the IAM role
- B. Use the IAM groups and add users, based upon their role, to different groups and apply the policy to group
- C. Create a policy and apply it to multiple users using a JSON script
- D. Create an S3 bucket policy with unlimited access which includes each user's IAM account ID

**Answer: B**

#### Explanation:

Option A is incorrect since you don't add a user to the IAM Role Option C is incorrect since you don't assign multiple users to a policy Option D is incorrect since this is not an ideal approach

An IAM group is used to collectively manage users who need the same set of permissions. By having groups, it becomes easier to manage permissions. So if you change the permissions on the group scale, it will affect all the users in that group

For more information on IAM Groups, just browse to the below URL: [https://docs.IAM.amazonaws.com/IAM/latest/UserGuide/id\\_groups.html](https://docs.IAM.amazonaws.com/IAM/latest/UserGuide/id_groups.html)

The correct answer is: Use the IAM groups and add users, based upon their role, to different groups and apply the policy to group

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#### NEW QUESTION 138

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 requirements?

- 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 requests
- 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 requests
- 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 requests
- 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 requests
- 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 142

A security engineer needs to create an IAM Key Management Service (IAM KMS) key that will be used to encrypt all data stored in a company's Amazon S3 Buckets in the us-west-1 Region. The key will use server-side encryption. Usage of the key must be limited to requests coming from Amazon S3 within the company's account. Which statement in the KMS key policy will meet these requirements?

A)



```
{
  "Effect": "Allow",
  "Principal": {
    "AWS": "*"
  },
  "Action": [
    "kms:Encrypt",
    "kms:Decrypt",
    "kms:ReEncrypt*",
    "kms:GenerateDataKey*",
    "kms:DescribeKey"
  ],
  "Resource": "*",
  "Condition": {
    "StringEquals": {
      "kms:ViaService": "s3.us-west-1.amazonaws.com",
      "kms:CallerAccount": "<CustomerAccountID>"
    }
  }
}
```

B)

```
{
  "Effect": "Allow",
  "Principal": {
    "AWS": "s3.us-west-1.amazonaws.com"
  },
  "Action": [
    "kms:Encrypt",
    "kms:Decrypt",
    "kms:ReEncrypt*",
    "kms:GenerateDataKey*",
    "kms:DescribeKey"
  ],
  "Resource": "*",
  "Condition": {
    "StringEquals": {
      "kms:CallerAccount": "<CustomerAccountID>"
    }
  }
}
```

C)

```
{
  "Effect": "Allow",
  "Principal": {
    "AWS": "*"
  },
  "Action": [
    "kms:Encrypt",
    "kms:Decrypt",
    "kms:ReEncrypt*",
    "kms:GenerateDataKey*",
    "kms:DescribeKey"
  ],
  "Resource": "*",
  "Condition": {
    "StringEquals": {
      "kms:EncryptionContext:aws:s3:arn": [
        "arn:aws:s3:::"
      ]
    }
  }
}
```

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

Answer: A

#### NEW QUESTION 145

A company's security team needs to receive a notification whenever an AWS access key has not been rotated in 90 or more days. A security engineer must develop a solution that provides these notifications automatically.

Which solution will meet these requirements with the LEAST amount of effort?

- A. Deploy an AWS Config managed rule to run on a periodic basis of 24 hour

- B. Select the access-keys-rotated managed rule, and set the maxAccessKeyAge parameter to 90 day
- C. Create an Amazon EventBridge (Amazon CloudWatch Events) rule with an event pattern that matches the compliance type of NON\_COMPLIANT from AWS Config for the managed rule
- D. Configure EventBridge (CloudWatch Events) to send an Amazon Simple Notification Service (Amazon SNS) notification to the security team.
- E. Create a script to export a .csv file from the AWS Trusted Advisor check for IAM access key rotation. Load the script into an AWS Lambda function that will upload the .csv file to an Amazon S3 bucket
- F. Create an Amazon Athena table query that runs when the .csv file is uploaded to the S3 bucket
- G. Publish the results for any keys older than 90 days by using an invocation of an Amazon Simple Notification Service (Amazon SNS) notification to the security team.
- H. Create a script to download the IAM credentials report on a periodic basis
- I. Load the script into an AWS Lambda function that will run on a schedule through Amazon EventBridge (Amazon CloudWatch Events). Configure the Lambda script to load the report into memory and to filter the report for records in which the key was last rotated at least 90 days ago
- J. If any records are detected, send an Amazon Simple Notification Service (Amazon SNS) notification to the security team.
- K. Create an AWS Lambda function that queries the IAM API to list all the users
- L. Iterate through the users by using the ListAccessKeys operation
- M. Verify that the value in the CreateDate field is not at least 90 days old
- N. Send an Amazon Simple Notification Service (Amazon SNS) notification to the security team if the value is at least 90 days old
- O. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to schedule the Lambda function to run each day.

**Answer:** A

#### NEW QUESTION 148

A security engineer needs to run an AWS CloudFormation script. The CloudFormation script builds AWS infrastructure to support a stack that includes web servers and a MySQL database. The stack has been deployed in pre-production environments and is ready for production.

The production script must comply with the principle of least privilege. Additionally, separation of duties must exist between the security engineer's IAM account and CloudFormation.

Which solution will meet these requirements?

- A. Use IAM Access Analyzer policy generation to generate a policy that allows the CloudFormation script to run and manage the stack
- B. Attach the policy to a new IAM role
- C. Modify the security engineer's IAM permissions to be able to pass the new role to CloudFormation.
- D. Create an IAM policy that allows ec2:\* and rds:\* permission
- E. Attach the policy to a new IAM role. Modify the security engineer's IAM permissions to be able to assume the new role.
- F. Use IAM Access Analyzer policy generation to generate a policy that allows the CloudFormation script to run and manage the stack
- G. Modify the security engineer's IAM permissions to be able to run the CloudFormation script.
- H. Create an IAM policy that allows ec2:\* and rds:\* permission
- I. Attach the policy to a new IAM role
- J. Use the IAM policy simulator to confirm that the policy allows the AWS API calls that are necessary to build the stack
- K. Modify the security engineer's IAM permissions to be able to pass the new role to CloudFormation.

**Answer:** A

#### Explanation:

The correct answer is A. Use IAM Access Analyzer policy generation to generate a policy that allows the CloudFormation script to run and manage the stack. Attach the policy to a new IAM role. Modify the security engineer's IAM permissions to be able to pass the new role to CloudFormation.

According to the AWS documentation, IAM Access Analyzer is a service that helps you identify the resources in your organization and accounts, such as Amazon S3 buckets or IAM roles, that are shared with an external entity. You can also use IAM Access Analyzer to generate fine-grained policies that grant least privilege access based on access activity and access attempts.

To use IAM Access Analyzer policy generation, you need to enable IAM Access Analyzer in your account or organization. You can then use the IAM console or the AWS CLI to generate a policy for a resource based on its access activity or access attempts. You can review and edit the generated policy before applying it to the resource.

To use IAM Access Analyzer policy generation with CloudFormation, you can follow these steps:

- Run the CloudFormation script in a pre-production environment and monitor its access activity or access attempts using IAM Access Analyzer.
- Use IAM Access Analyzer policy generation to generate a policy that allows the CloudFormation script to run and manage the stack. The policy will include only the permissions that are necessary for the script to function.
- Attach the policy to a new IAM role that has a trust relationship with CloudFormation. This will allow CloudFormation to assume the role and execute the script.
- Modify the security engineer's IAM permissions to be able to pass the new role to CloudFormation.

This will allow the security engineer to launch the stack using the role.

- Run the CloudFormation script in the production environment using the new role.

This solution will meet the requirements of least privilege and separation of duties, as it will limit the permissions of both CloudFormation and the security engineer to only what is needed for running and managing the stack.

Option B is incorrect because creating an IAM policy that allows ec2:\* and rds:\* permissions is not following the principle of least privilege, as it will grant more permissions than necessary for running and managing the stack. Moreover, modifying the security engineer's IAM permissions to be able to assume the new role is not ensuring separation of duties, as it will allow the security engineer to bypass CloudFormation and directly access the resources.

Option C is incorrect because modifying the security engineer's IAM permissions to be able to run the CloudFormation script is not ensuring separation of duties, as it will allow the security engineer to execute the script without using CloudFormation.

Option D is incorrect because creating an IAM policy that allows ec2:\* and rds:\* permissions is not following the principle of least privilege, as it will grant more permissions than necessary for running and managing the stack. Using the IAM policy simulator to confirm that the policy allows the AWS API calls that are necessary to build the stack is not sufficient, as it will not generate a fine-grained policy based on access activity or access attempts.

#### NEW QUESTION 153

A company uses AWS Organizations. The company has teams that use an AWS CloudHSM hardware security module (HSM) that is hosted in a central AWS account. One of the teams creates its own new dedicated AWS account and wants to use the HSM that is hosted in the central account.

How should a security engineer share the HSM that is hosted in the central account with the new dedicated account?

- A. Use AWS Resource Access Manager (AWS RAM) to share the VPC subnet ID of the HSM that is hosted in the central account with the new dedicated account
- B. Configure the CloudHSM security group to accept inbound traffic from the private IP addresses of client instances in the new dedicated account.
- C. Use AWS Identity and Access Management (IAM) to create a cross-account role to access the CloudHSM cluster that is in the central account. Create a new IAM user in the new dedicated account. Assign the cross-account role to the new IAM user.

- D. Use AWS IAM Identity Center (AWS Single Sign-On) to create an AWS Security Token Service (AWS STS) token to authenticate from the new dedicated account to the central account.
- E. Use the cross-account permissions that are assigned to the STS token to invoke an operation on the HSM in the central account.
- F. Use AWS Resource Access Manager (AWS RAM) to share the ID of the HSM that is hosted in the central account with the new dedicated account.
- G. Configure the CloudHSM security group to accept inbound traffic from the private IP addresses of client instances in the new dedicated account.

**Answer:** A

**Explanation:**

<https://aws.amazon.com/premiumsupport/knowledge-center/cloudhsm-share-clusters/#:~:text=In%20the%20nav>

**NEW QUESTION 155**

A developer is building a serverless application hosted on AWS Lambda that uses Amazon Redshift in a data store. The application has separate modules for read/write and read-only functionality. The modules need their own database users for compliance reasons.

Which combination of steps should a security engineer implement to grant appropriate access? (Select TWO)

- A. Configure cluster security groups for each application module to control access to database users that are required for read-only and read/write.
- B. Configure a VPC endpoint for Amazon Redshift. Configure an endpoint policy that maps database users to each application module, and allow access to the tables that are required for read-only and read/write.
- C. Configure an IAM policy for each module. Specify the ARN of an Amazon Redshift database user that allows the GetClusterCredentials API call.
- D. Create local database users for each module.
- E. Configure an IAM policy for each module. Specify the ARN of an IAM user that allows the GetClusterCredentials API call.

**Answer:** CD

**Explanation:**

To grant appropriate access to the application modules, the security engineer should do the following:

- Configure an IAM policy for each module. Specify the ARN of an Amazon Redshift database user that allows the GetClusterCredentials API call. This allows the application modules to use temporary credentials to access the database with the permissions of the specified user.
- Create local database users for each module. This allows the security engineer to create separate users for read/write and read-only functionality, and to assign them different privileges on the database tables.

**NEW QUESTION 159**

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 an IAM policy to prevent users from 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.html](https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scps_examples_general.html)

**NEW QUESTION 163**

A company hosts multiple externally facing applications, each isolated in its own AWS 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 165**

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