

SCS-C01 Dumps

AWS Certified Security- Specialty

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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 Instances¹. 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 Region². 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 discovers a billing anomaly in its AWS account. A security consultant investigates the anomaly and discovers that an employee who left the company 30 days ago still has access to the account.

The company has not monitored account activity in the past.

The security consultant needs to determine which resources have been deployed or reconfigured by the employee as quickly as possible.

Which solution will meet these requirements?

- A. In AWS Cost Explorer, filter chart data to display results from the past 30 days
- B. Export the results to a data table
- C. Group the data table by resource.
- D. Use AWS Cost Anomaly Detection to create a cost monitor
- E. Access the detection history
- F. Set the time frame to Last 30 days
- G. In the search area, choose the service category.
- H. In AWS CloudTrail, filter the event history to display results from the past 30 days
- I. Create an Amazon Athena table that contains the data
- J. Partition the table by event source.
- K. Use AWS Audit Manager to create an assessment for the past 30 days
- L. Apply a usage-based framework to the assessment
- M. Configure the assessment to assess by resource.

Answer: C

NEW QUESTION 4

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 5

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

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

Answer: C

Explanation:

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

NEW QUESTION 6

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 Simple Notification 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 notices.
- 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 7

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:rds:us-west-1:*` as the principal.

Answer: B

Explanation:

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

NEW QUESTION 8

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 CloudWatc
- 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 analysi
- E. Deliver email alerts to the security team by configuring an SNS topic as a second target for the CloudWatch alar
- 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 CloudTrai
- 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 analysi
- K. Deliver email alerts to the security team by configuring an SNS topic as a second target for CloudTrai
- 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 analysi
- Q. Deliver email alerts to the security team by configuring an SNS topic as a second target for EventBridg
- 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 analysi
- . Deliver email alerts to the security team by configuring an SNS topic as a second target for EventBridg
- . Use event pattern matching with an EventBridge event rule to send only High severity findings in the alerts.

Answer: C

NEW QUESTION 9

A large corporation is creating a multi-account strategy and needs to determine how its employees should access the IAM infrastructure.

Which of the following solutions would provide the MOST scalable solution?

- A. Create dedicated IAM users within each IAM account that employees can assume through federationbased upon group membership in their existing identity provider
- B. Use a centralized account with IAM roles that employees can assume through federation with their existing identity provider Use cross-account roles to allow the federated users to assume their target role in the resource accounts.
- C. Configure the IAM Security Token Service to use Kerberos tokens so that users can use their existing corporate user names and passwords to access IAM resources directly
- D. Configure the IAM trust policies within each account's role to set up a trust back to the corporation's existing identity provider allowing users to assume the role based off their SAML token

Answer: B

Explanation:

the most scalable solution for accessing the IAM infrastructure in a multi-account strategy. A multi-account strategy is a way of organizing your AWS resources into multiple IAM accounts for security, billing, and management purposes. Federation is a process that allows users to access AWS resources using credentials from an external identity provider such as Active Directory or SAML. IAM roles are sets of permissions that grant access to AWS resources. Cross-account roles are IAM roles that allow users in one account to access resources in another account. By using a centralized account with IAM roles that employees can assume through federation with their existing identity provider, you can simplify and streamline the access management process. By using cross-account roles to allow the federated users to assume their target role in the resource accounts, you can enable granular and flexible access control across multiple accounts. The other options are either less scalable or less secure for accessing the IAM infrastructure in a multi-account strategy.

NEW QUESTION 10

A security team is developing an application on an Amazon EC2 instance to get objects from an Amazon S3 bucket. All objects in the S3 bucket are encrypted with an AWS Key Management Service (AWS KMS) customer managed key. All network traffic for requests that are made within the VPC is restricted to the AWS infrastructure. This traffic does not traverse the public internet.

The security team is unable to get objects from the S3 bucket Which factors could cause this issue? (Select THREE.)

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

Answer: ADE

Explanation:

<https://docs.aws.amazon.com/vpc/latest/userguide/security-group-rules.html>

To get objects from an S3 bucket that are encrypted with a KMS customer managed key, the security team needs to have the following factors in place:

- The IAM instance profile that is attached to the EC2 instance must allow the s3:GetObject action to the S3 bucket or object in the AWS account. This permission is required to read the object from S3. Option A is incorrect because it specifies the s3:ListBucket action, which is only required to list the objects in the bucket, not to get them.
- The KMS key policy that encrypts the object in the S3 bucket must allow the kms:Decrypt action to the EC2 instance profile ARN. This permission is required to decrypt the object using the KMS key. Option D is correct.
- The security group that is attached to the EC2 instance must have an outbound rule to the S3 managed prefix list over port 443. This rule is required to allow HTTPS traffic from the EC2 instance to S3 within the AWS infrastructure. Option E is correct. Option B is incorrect because it specifies the s3:ListParts action, which is only required for multipart uploads, not for getting objects. Option C is incorrect because it specifies the kms:ListKeys action, which is not required for getting objects. Option F is incorrect because it specifies an inbound rule from the S3 managed prefix list, which is not required for getting objects. Verified References:

➤ <https://docs.aws.amazon.com/kms/latest/developerguide/control-access.html>

➤ <https://docs.aws.amazon.com/vpc/latest/userguide/vpc-endpoints-s3.html>

NEW QUESTION 10

An Incident Response team is investigating an IAM access key leak that resulted in Amazon EC2 instances being launched. The company did not discover the incident until many months later The Director of Information Security wants to implement new controls that will alert when similar incidents happen in the future Which controls should the company implement to achieve this? {Select TWO.)

- A. Enable VPC Flow Logs in all VPCs Create a scheduled IAM Lambda function that downloads and parses the logs, and sends an Amazon SNS notification for violations.
- B. Use IAM CloudTrail to make a trail, and apply it to all Regions Specify an Amazon S3 bucket to receive all the CloudTrail log files
- C. Add the following bucket policy to the company's IAM CloudTrail bucket to prevent log tampering{"Version": "2012-10-17","Statement": { "Effect": "Deny","Action": "s3:PutObject", "Principal": "-", "Resource": "arn:iam:s3:::cloudtrail/IAMLogs/111122223333/*"}}Create an Amazon S3 data event for an PutObject attempts, which sends notifications to an Amazon SNS topic.
- D. Create a Security Auditor role with permissions to access Amazon CloudWatch Logs m all Regions Ship the logs to an Amazon S3 bucket and make a lifecycle policy to ship the logs to Amazon S3 Glacier.
- E. Verify that Amazon GuardDuty is enabled in all Regions, and create an Amazon CloudWatch Events rule for Amazon GuardDuty findings Add an Amazon SNS topic as the rule's target

Answer: AE

NEW QUESTION 14

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

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

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

Answer: C

Explanation:

https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scps_syntax.html#scp-eleme

NEW QUESTION 16

A company is building an application on AWS that will store sensitive information. The company has a support team with access to the IT infrastructure, including databases. The company's security engineer must introduce measures to protect the sensitive data against any data breach while minimizing management overhead. The credentials must be regularly rotated.

What should the security engineer recommend?

- A. Enable Amazon RDS encryption to encrypt the database and snapshot
- B. Enable Amazon Elastic Block Store (Amazon EBS) encryption on Amazon EC2 instance
- C. Include the database credential in the EC2 user data file
- D. Use an AWS Lambda function to rotate database credential
- E. Set up TLS for the connection to the database.
- F. Install a database on an Amazon EC2 instance
- G. Enable third-party disk encryption to encrypt Amazon Elastic Block Store (Amazon EBS) volume
- H. Store the database credentials in AWS CloudHSM with automatic rotation
- I. Set up TLS for the connection to the database.
- J. Enable Amazon RDS encryption to encrypt the database and snapshot
- K. Enable Amazon Elastic Block Store (Amazon EBS) encryption on Amazon EC2 instance
- L. Store the database credentials in AWS Secrets Manager with automatic rotation
- M. Set up TLS for the connection to the RDS hosted database.
- N. Set up an AWS CloudHSM cluster with AWS Key Management Service (AWS KMS) to store KMS key
- O. Set up Amazon RDS encryption using AWS KMS to encrypt the database
- P. Store the database credentials in AWS Systems Manager Parameter Store with automatic rotation
- Q. Set up TLS for the connection to the RDS hosted database.

Answer: C

NEW QUESTION 21

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 22

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 26

A company wants to monitor the deletion of AWS Key Management Service (AWS KMS) customer managed keys. A security engineer needs to create an alarm that will notify the company before a KMS key is deleted. The security engineer has configured the integration of AWS CloudTrail with Amazon CloudWatch.

What should the security engineer do next to meet these requirements?

- A. Specify the deletion time of the key material during KMS key creation
- B. Create a custom AWS Config rule to assess the key's scheduled deletion
- C. Configure the rule to trigger upon a configuration change
- D. Send a message to an Amazon Simple Notification Service (Amazon SNS) topic if the key is scheduled for deletion.
- E. Create an Amazon EventBridge rule to detect KMS API calls of DeleteAlias
- F. Create an AWS Lambda function to send an Amazon Simple Notification Service (Amazon SNS) message to the company
- G. Add the Lambda function as the target of the EventBridge rule.
- H. Create an Amazon EventBridge rule to detect KMS API calls of DisableKey and ScheduleKeyDeletion. Create an AWS Lambda function to send an Amazon Simple Notification Service (Amazon SNS) message to the company

- I. Add the Lambda function as the target of the EventBridge rule.
- J. Create an Amazon Simple Notification Service (Amazon SNS) policy to detect KMS API calls of RevokeGrant and ScheduleKeyDeletion. Create an AWS Lambda function to generate the alarm and send the notification to the company.
- K. Add the Lambda function as the target of the SNS policy.

Answer: C

Explanation:

The AWS documentation states that you can create an Amazon EventBridge rule to detect KMS API calls of DisableKey and ScheduleKeyDeletion. You can then create an AWS Lambda function to send an Amazon Simple Notification Service (Amazon SNS) message to the company. You can add the Lambda function as the target of the EventBridge rule. This method will meet the requirements.

References: : AWS KMS Developer Guide

NEW QUESTION 31

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

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

Answer: ABC

Explanation:

The key length for an RSA certificate that you use with CloudFront is 2048 bits, even though ACM supports larger keys. If you use an imported certificate with CloudFront, your key length must be 1024 or 2048 bits and cannot exceed 2048 bits. You must import the certificate in the US East (N. Virginia) Region. You must have permission to use and import the SSL/TLS certificate

<https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/cnames-and-https-requirements.html>

NEW QUESTION 33

A security engineer recently rotated all IAM access keys in an AWS account. The security engineer then configured AWS Config and enabled the following AWS Config managed rules; mfa-enabled-for-iam-console-access, iam-user-mfa-enabled, access-key-rotated, and iam-user-unused-credentials-check.

The security engineer notices that all resources are displaying as noncompliant after the IAM GenerateCredentialReport API operation is invoked.

What could be the reason for the noncompliant status?

- A. The IAM credential report was generated within the past 4 hours.
- B. The security engineer does not have the GenerateCredentialReport permission.
- C. The security engineer does not have the GetCredentialReport permission.
- D. The AWS Config rules have a MaximumExecutionFrequency value of 24 hours.

Answer: D

Explanation:

The correct answer is D. The AWS Config rules have a MaximumExecutionFrequency value of 24 hours. According to the AWS documentation¹, the MaximumExecutionFrequency parameter specifies the maximum frequency with which AWS Config runs evaluations for a rule. For AWS Config managed rules, this value can be one of the following:

- One_Hour
- Three_Hours
- Six_Hours
- Twelve_Hours
- TwentyFour_Hours

If the rule is triggered by configuration changes, it will still run evaluations when AWS Config delivers the configuration snapshot. However, if the rule is triggered periodically, it will not run evaluations more often than the specified frequency.

In this case, the security engineer enabled four AWS Config managed rules that are triggered periodically. Therefore, these rules will only run evaluations every 24 hours, regardless of when the IAM credential report is generated. This means that the resources will display as noncompliant until the next evaluation cycle, which could take up to 24 hours after the IAM access keys are rotated.

The other options are incorrect because:

- A. The IAM credential report can be generated at any time, but it will not affect the compliance status of the resources until the next evaluation cycle of the AWS Config rules.
- B. The security engineer was able to invoke the IAM GenerateCredentialReport API operation, which means they have the GenerateCredentialReport permission. This permission is required to generate a credential report that lists all IAM users in an AWS account and their credential status².
- C. The security engineer does not need the GetCredentialReport permission to enable or evaluate AWS Config rules. This permission is required to retrieve a credential report that was previously generated by using the GenerateCredentialReport operation².

References:

1: AWS::Config::ConfigRule - AWS CloudFormation 2: IAM: Generate and retrieve IAM credential reports

NEW QUESTION 37

A company uses AWS Organizations to manage several AWS accounts. The company processes a large volume of sensitive data. The company uses a serverless approach to microservices. The company stores all the data in either Amazon S3 or Amazon DynamoDB. The company reads the data by using either AWS Lambda functions or container-based services that the company hosts on Amazon Elastic Kubernetes Service (Amazon EKS) on AWS Fargate.

The company must implement a solution to encrypt all the data at rest and enforce least privilege data access controls. The company creates an AWS Key Management Service (AWS KMS) customer managed key.

What should the company do next to meet these requirements?

- A. Create a key policy that allows the kms:Decrypt action only for Amazon S3 and DynamoD

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

Answer: B

NEW QUESTION 42

A company uses AWS Organizations to manage a multi-account AWS environment in a single AWS Region. The organization's management account is named management-01. The company has turned on AWS Config in all accounts in the organization. The company has designated an account named security-01 as the delegated administrator for AWS Config.

All accounts report the compliance status of each account's rules to the AWS Config delegated administrator account by using an AWS Config aggregator. Each account administrator can configure and manage the account's own AWS Config rules to handle each account's unique compliance requirements.

A security engineer needs to implement a solution to automatically deploy a set of 10 AWS Config rules to all existing and future AWS accounts in the organization. The solution must turn on AWS Config automatically during account creation.

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

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

Answer: BE

NEW QUESTION 46

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's 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 in 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 in 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 in 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 48

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 team.
- B. Associate policies with each IAM group.
- C. Provision IAM users for each application team member.
- 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 roles for each team.
- F. Conduct a quarterly review of the IAM roles the team leads have provisioned.
- G. Ensure that the application team leads have the appropriate training to review IAM roles.
- H. Put each AWS account in its own OU.
- I. Add an SCP to each OU to grant access to only the AWS services that the teams plan to use.
- J. Include conditions in the AWS account of each team.
- K. Create an SCP and a permissions boundary for IAM roles.
- 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

NEW QUESTION 50

A company that uses AWS Organizations wants to see AWS Security Hub findings for many AWS accounts and AWS Regions. Some of the accounts are in the company's organization, and some accounts are in organizations that the company manages for customers. Although the company can see findings in the Security Hub administrator account for accounts in the company's organization, there are no findings from accounts in other organizations.

Which combination of steps should the company take to see findings from accounts that are outside the organization that includes the Security Hub administrator account? (Select TWO.)

- A. Use a designated administration account to automatically set up member accounts.
- B. Create the AWS Service Role ForSecurity Hub service-linked role for Security Hub.
- C. Send an administration request from the member accounts.
- D. Enable Security Hub for all member accounts.
- E. Send invitations to accounts that are outside the company's organization from the Security Hub administrator account.

Answer: CE

Explanation:

To see Security Hub findings for accounts that are outside the organization that includes the Security Hub administrator account, the following steps are required:

- Send invitations to accounts that are outside the company's organization from the Security Hub administrator account. This will allow the administrator account to view and manage findings from those accounts. The administrator account can send invitations by using the Security Hub console, API, or CLI. For more information, see [Sending invitations to member accounts](#).
- Send an administration request from the member accounts. This will allow the member accounts to accept the invitation from the administrator account and establish a relationship with it. The member accounts can send administration requests by using the Security Hub console, API, or CLI. For more information, see [Sending administration requests](#).

This solution will enable the company to see Security Hub findings for many AWS accounts and AWS Regions, including accounts that are outside its own organization.

The other options are incorrect because they either do not establish a relationship between the administrator and member accounts (A, B), do not enable Security Hub for all member accounts (D), or do not use a valid service for Security Hub (F).

Verified References:

- <https://docs.aws.amazon.com/securityhub/latest/userguide/securityhub-member-accounts.html>

NEW QUESTION 55

A company created an IAM account for its developers to use for testing and learning purposes. Because the IAM account will be shared among multiple teams of developers, the company wants to restrict the ability to stop and terminate Amazon EC2 instances so that a team can perform these actions only on the instances it owns.

Developers were instructed to tag all their instances with a Team tag key and use the team name in the tag value. One of the first teams to use this account is Business Intelligence. A security engineer needs to develop a highly scalable solution for providing developers with access to the appropriate resources within the account. The security engineer has already created individual IAM roles for each team.

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

- A. For each team, create an IAM policy similar to the one that follows. Populate the `ec2: ResourceTag/Team` condition key with a proper team name. Attach resulting policies to the corresponding IAM roles.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "NotAction": [
        "ec2:StopInstances",
        "ec2:TerminateInstances"
      ],
      "Resource": "*"
    },
    {
      "Effect": "Allow",
      "Action": [
        "ec2:StopInstances",
        "ec2:TerminateInstances"
      ],
      "Resource": "*",
      "Condition": {
        "StringEquals": {
          "ec2:ResourceTag/Team": "BusinessIntelligence"
        }
      }
    }
  ]
}
```

- B. For each team create an IAM policy similar to the one that follows Populate the IAM TagKeys/Team condition key with a proper team name
C. Attach the resuming policies to the corresponding IAM roles.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "NotAction": [
        "ec2:StopInstances",
        "ec2:TerminateInstances"
      ],
      "Resource": "*"
    },
    {
      "Effect": "Allow",
      "Action": [
        "ec2:StopInstances",
        "ec2:TerminateInstances"
      ],
      "Resource": "*",
      "Condition": {
        "ForAnyValue:StringEquals": {
          "aws:TagKeys/Team": "BusinessIntelligence"
        }
      }
    }
  ]
}
```

- D. Tag each IAM role with a Team tag key
E. and use the team name in the tag value
F. Create an IAM policy similar to the one that follows, and attach it to all the IAM roles used by developers.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "NotAction": [
        "ec2:StopInstances",
        "ec2:TerminateInstances"
      ],
      "Resource": "*"
    },
    {
      "Effect": "Allow",
      "Action": [
        "ec2:StopInstances",
        "ec2:TerminateInstances"
      ],
      "Resource": "*",
      "Condition": {
        "StringEquals": {
          "ec2:ResourceTag/Team": "${aws:PrincipalTag/Team}"
        }
      }
    }
  ]
}
```

- G. Tag each IAM role with the Team key, and use the team name in the tag value
H. Create an IAM policy similar to the one that follows, and attach it to all the IAM roles used by developers.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "NotAction": [
        "ec2:StopInstances",
        "ec2:TerminateInstances"
      ],
      "Resource": "*"
    },
    {
      "Effect": "Allow",
      "Action": [
        "ec2:StopInstances",
        "ec2:TerminateInstances"
      ],
      "Resource": "*",
      "Condition": {
        "ForAnyValue:StringEquals": {
          "aws:TagKeys/Team": "2 (aws:PrincipalTag/Team)"
        }
      }
    }
  ]
}
```

Answer: A

NEW QUESTION 58

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 triggered¹².

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 Console³.
- 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 queries⁴.
- 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 Console⁵.

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 61

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

- A. Designate an AWS account as a delegated administrator for Security Hub
- B. Publish events to Amazon CloudWatch from the delegated administrator account, all member accounts, and required Regions that are enabled for Security Hub findings.
- C. Designate an AWS account in an organization in AWS Organizations as a delegated administrator for Security Hub
- D. Publish events to Amazon EventBridge from the delegated administrator account, all member accounts, and required Regions that are enabled for Security Hub findings.
- E. In each Region, create an Amazon EventBridge rule to deliver findings to an Amazon Kinesis data stream
- F. Configure the Kinesis data streams to output the logs to a single Amazon S3 bucket.
- G. In each Region, create an Amazon EventBridge rule to deliver findings to an Amazon Kinesis Data Firehose delivery stream
- H. Configure the Kinesis Data Firehose delivery streams to deliver the logs to a single Amazon S3 bucket.
- I. Use AWS Glue DataBrew to crawl the Amazon S3 bucket and build the schema
- J. Use AWS Glue Data Catalog to query the data and create views to flatten nested attributes

- K. Build Amazon QuickSight dashboards by using Amazon Athena.
- L. Partition the Amazon S3 data.
- M. Use AWS Glue to crawl the S3 bucket and build the schema.
- N. Use Amazon Athena to query the data and create views to flatten nested attributes.
- O. Build Amazon QuickSight dashboards that use the Athena views.

Answer: BDF

Explanation:

The correct answer is B, D, and F. Designate an AWS account in an organization in AWS Organizations as a delegated administrator for Security Hub. Publish events to Amazon EventBridge from the delegated administrator account, all member accounts, and required Regions that are enabled for Security Hub findings. In each Region, create an Amazon EventBridge rule to deliver findings to an Amazon Kinesis Data Firehose delivery stream. Configure the Kinesis Data Firehose delivery streams to deliver the logs to a single Amazon S3 bucket. Partition the Amazon S3 data. Use AWS Glue to crawl the S3 bucket and build the schema. Use Amazon Athena to query the data and create views to flatten nested attributes. Build Amazon QuickSight dashboards that use the Athena views.

According to the AWS documentation, AWS Security Hub is a service that provides you with a comprehensive view of your security state across your AWS accounts, and helps you check your environment against security standards and best practices. You can use Security Hub to aggregate security findings from various sources, such as AWS services, partner products, or your own applications.

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

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

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

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

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

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

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

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

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

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

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

According to the AWS documentation, Amazon QuickSight is a fast, cloud-powered business intelligence

service that makes it easy to deliver insights to everyone in your organization. You can use QuickSight to create and publish interactive dashboards that include machine learning insights. You can also use QuickSight to connect to various data sources, such as Athena, S3, or RDS.

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

NEW QUESTION 64

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

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

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

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

Answer: AC

Explanation:

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

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

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

NEW QUESTION 68

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 73

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

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

Answer: ACD

NEW QUESTION 75

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

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

The security team has enabled CloudTrail for AWS management events with a basic configuration in the AWS Region in which EventBridge is being tested.

Verification of the EventBridge event pattern indicates that the pattern is set up correctly. The security team must implement a solution so that the s3:PutObjectAcl API call will invoke an EventBridge event. The solution must not generate false notifications.

Which solution will meet these requirements?

- A. Modify the EventBridge event pattern by selecting Amazon S3. Select All Events as the event type.
- B. Modify the EventBridge event pattern by selecting Amazon S3. Select Bucket Level Operations as the event type.

- C. Enable CloudTrail Insights to identify unusual API activity.
- D. Enable CloudTrail to monitor data events for read and write operations to S3 buckets.

Answer: D

Explanation:

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

By default, trails do not log data events. To record CloudTrail data events, you must explicitly add the

supported resources or resource types for which you want to collect activity. For more information, see Logging data events in the Amazon S3 User Guide².

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

➤ A. Modifying the EventBridge event pattern by selecting Amazon S3 and All Events as the event type will not capture the s3:PutObjectAcl API call, because this is a data event and not a management event. Management events provide information about management operations that are performed on resources in your AWS account. These are also known as control plane operations⁴.

➤ B. Modifying the EventBridge event pattern by selecting Amazon S3 and Bucket Level Operations as the event type will not capture the s3:PutObjectAcl API call, because this is a data event that affects the S3 object resource type and not the S3 bucket resource type. Bucket level operations are management events that affect the configuration or metadata of an S3 bucket⁵.

➤ C. Enabling CloudTrail Insights to identify unusual API activity will not help the security team monitor new S3 objects or changes to any S3 bucket policy or setting that result in public access. CloudTrail Insights helps AWS users identify and respond to unusual activity associated with API calls and API error rates by continuously analyzing CloudTrail management events⁶. It does not analyze data events or generate EventBridge events.

References:

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

NEW QUESTION 79

A security engineer needs to build a solution to turn IAM CloudTrail back on in multiple IAM Regions in case it is ever turned off.

What is the MOST efficient way to implement this solution?

- A. Use IAM Config with a managed rule to trigger the IAM-EnableCloudTrail remediation.
- B. Create an Amazon EventBridge (Amazon CloudWatch Events) event with a cloudtrail.amazonaws.com event source and a StartLogging event name to trigger an IAM Lambda function to call the StartLogging API.
- C. Create an Amazon CloudWatch alarm with a cloudtrail.amazonaws.com event source and a StopLogging event name to trigger an IAM Lambda function to call the StartLogging API.
- D. Monitor IAM Trusted Advisor to ensure CloudTrail logging is enabled.

Answer: B

NEW QUESTION 80

A company recently had a security audit in which the auditors identified multiple potential threats. These potential threats can cause usage pattern changes such as DNS access peak, abnormal instance traffic, abnormal network interface traffic, and unusual Amazon S3 API calls. The threats can come from different sources and can occur at any time. The company needs to implement a solution to continuously monitor its system and identify all these incoming threats in near-real time. Which solution will meet these requirements?

- A. Enable AWS CloudTrail logs, VPC flow logs, and DNS log
- B. Use Amazon CloudWatch Logs to manage these logs from a centralized account.
- C. Enable AWS CloudTrail logs, VPC flow logs, and DNS log
- D. Use Amazon Macie to monitor these logs from a centralized account.
- E. Enable Amazon GuardDuty from a centralized account
- F. Use GuardDuty to manage AWS CloudTrail logs, VPC flow logs, and DNS logs.
- G. Enable Amazon Inspector from a centralized account
- H. Use Amazon Inspector to manage AWS CloudTrail logs, VPC flow logs, and DNS logs.

Answer: C

Explanation:

Q: Which data sources does GuardDuty analyze? GuardDuty analyzes CloudTrail management event logs, CloudTrail S3 data event logs, VPC Flow Logs, DNS query logs, and Amazon EKS audit logs. GuardDuty can also scan EBS volume data for possible malware when GuardDuty Malware Protection is enabled and identifies suspicious behavior indicative of malicious software in EC2 instance or container workloads. The service is optimized to consume large data volumes for near real-time processing of security detections. GuardDuty gives you access to built-in detection techniques developed and optimized for the cloud, which are maintained and continuously improved upon by GuardDuty engineering.

NEW QUESTION 82

A company uses Amazon GuardDuty. The company's security team wants all High severity findings to automatically generate a ticket in a third-party ticketing system through email integration.

Which solution will meet this requirement?

- A. Create a verified identity for the third-party ticketing email system in Amazon Simple Email Service (Amazon SES). Create an Amazon EventBridge rule that includes an event pattern that matches High severity GuardDuty finding
- B. Specify the SES identity as the target for the EventBridge rule.
- C. Create an Amazon Simple Notification Service (Amazon SNS) topic
- D. Subscribe the third-party ticketing email system to the SNS topic
- E. Create an Amazon EventBridge rule that includes an event pattern that matches High severity GuardDuty finding
- F. Specify the SNS topic as the target for the EventBridge rule.
- G. Use the GuardDuty CreateFilter API operation to build a filter in GuardDuty to monitor for High severity finding
- H. Export the results of the filter to an Amazon Simple Notification Service (Amazon SNS) topic

- I. Subscribe the third-party ticketing email system to the SNS topic.
- J. Use the GuardDuty CreateFilter API operation to build a filter in GuardDuty to monitor for High severity finding
- K. Create an Amazon Simple Notification Service (Amazon SNS) topic
- L. Subscribe the third-party ticketing email system to the SNS topic
- M. Create an Amazon EventBridge rule that includes an event pattern that matches GuardDuty findings that are selected by the filter
- N. Specify the SNS topic as the target for the EventBridge rule.

Answer: B

Explanation:

The correct answer is B. Create an Amazon Simple Notification Service (Amazon SNS) topic. Subscribe the third-party ticketing email system to the SNS topic. Create an Amazon EventBridge rule that includes an event pattern that matches High severity GuardDuty findings. Specify the SNS topic as the target for the EventBridge rule.

According to the AWS documentation¹, you can use Amazon EventBridge to create rules that match events from GuardDuty and route them to targets such as Amazon SNS topics. You can use event patterns to filter events based on criteria such as severity, type, or resource. For example, you can create a rule that matches only High severity findings and sends them to an SNS topic that is subscribed by a third-party ticketing email system. This way, you can automate the creation of tickets for High severity findings and notify the security team.

NEW QUESTION 83

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 85

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 90

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

Please select:

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

Answer: A

Explanation:

The IAM Documentation mentions the following

To determine whether a log file was modified, deleted, or unchanged after CloudTrail delivered it you can use CloudTrail log file integrity validation. This feature is built using industry standard algorithms: SHA-256 for hashing and SHA-256 with RSA for digital signing. This makes it computationally infeasible to modify, delete or forge CloudTrail log files without detection. You can use the IAM CLI to validate the files in the location where CloudTrail delivered them

Validated log files are invaluable in security and forensic investigations. For example, a validated log file enables you to assert positively that the log file itself has not changed, or that particular user credentials performed specific API activity. The CloudTrail log file integrity validation process also lets you know if a log file has been deleted or changed, or assert positively that no log files were delivered to your account during a given period of time.

Options B.C and D is invalid because you need to check for log File Integrity Validation for cloudtrail logs For more information on Cloudtrail log file validation, please visit the below URL: <http://docs.IAM.amazon.com/IAMcloudtrail/latest/userguide/cloudtrail-log-file-validation-intro.html>
The correct answer is: Use CloudTrail Log File Integrity Validation. omit your Feedback/Queries to our Expert

NEW QUESTION 95

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 98

A company uses AWS Organizations and has production workloads across multiple AWS accounts. A security engineer needs to design a solution that will proactively monitor for suspicious behavior across all the accounts that contain production workloads. The solution must automate remediation of incidents across the production accounts. The solution also must publish a notification to an Amazon Simple Notification Service (Amazon SNS) topic when a critical security finding is detected. In addition, the solution must send all security incident logs to a dedicated account.
Which solution will meet these requirements?

- A. Activate Amazon GuardDuty in each production account
- B. In a dedicated logging account
- C. aggregate all GuardDuty logs from each production account
- D. Remediate incidents by configuring GuardDuty to directly invoke an AWS Lambda function
- E. Configure the Lambda function to also publish notifications to the SNS topic.
- F. Activate AWS security Hub in each production account
- G. In a dedicated logging account
- H. aggregate all security Hub findings from each production account
- I. Remediate incidents by using AWS Config and AWS Systems Manager
- J. Configure Systems Manager to also publish notifications to the SNS topic.
- K. Activate Amazon GuardDuty in each production account
- L. In a dedicated logging account
- M. aggregate all GuardDuty logs from each production account Remediate incidents by using Amazon EventBridge to invoke a custom AWS Lambda function from the GuardDuty finding
- N. Configure the Lambda function to also publish notifications to the SNS topic.
- O. Activate AWS Security Hub in each production account
- P. In a dedicated logging account
- Q. aggregate all Security Hub findings from each production account
- R. Remediate incidents by using Amazon EventBridge to invoke a custom AWS Lambda function from the Security Hub finding
- S. Configure the Lambda function to also publish notifications to the SNS topic.

Answer: D

Explanation:

The correct answer is D.

To design a solution that will proactively monitor for suspicious behavior across all the accounts that contain production workloads, the security engineer needs to use a service that can aggregate and analyze security findings from multiple sources. AWS Security Hub is a service that provides a comprehensive view of your security posture across your AWS accounts and enables you to check your environment against security standards and best practices. Security Hub also integrates with other AWS services, such as Amazon GuardDuty, AWS Config, and AWS Systems Manager, to collect and correlate security findings.

To automate remediation of incidents across the production accounts, the security engineer needs to use a service that can trigger actions based on events.

Amazon EventBridge is a serverless event bus service that allows you to connect your applications with data from a variety of sources. EventBridge can use rules to match events and route them to targets for processing. You can use EventBridge to invoke a custom AWS Lambda function from the Security Hub findings.

Lambda is a serverless compute service that lets you run code without provisioning or managing servers.

To publish a notification to an Amazon SNS topic when a critical security finding is detected, the security engineer needs to use a service that can send messages to subscribers. 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 configure the Lambda function to also publish notifications to the SNS topic.

To send all security incident logs to a dedicated account, the security engineer needs to use a service that can aggregate and store log data from multiple sources. AWS Security Hub allows you to aggregate security findings from multiple accounts into a single account using the delegated administrator feature. This feature enables you to designate an AWS account as the administrator for Security Hub in an organization. The administrator account can then view and manage Security Hub findings from all member accounts.

Therefore, option D is correct because it meets all the requirements of the solution. Option A is incorrect because GuardDuty does not provide a comprehensive view of your security posture across your AWS accounts. GuardDuty is primarily a threat detection service that monitors for malicious or unauthorized behavior. Option B is incorrect because Config and Systems Manager are not designed to automate remediation of incidents based on Security Hub findings. Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources, while Systems Manager is a service that allows you to manage your infrastructure on AWS at scale. Option C is incorrect because GuardDuty does not provide a comprehensive view of your security posture across your AWS accounts.

References:

- AWS Security Hub
- Amazon EventBridge
- AWS Lambda
- Amazon SNS

➤ Aggregating Security Hub findings across accounts

NEW QUESTION 100

Within a VPC, a corporation runs an Amazon RDS Multi-AZ DB instance. The database instance is connected to the internet through a NAT gateway via two subnets.

Additionally, the organization has application servers that are hosted on Amazon EC2 instances and use the RDS database. These EC2 instances have been deployed onto two more private subnets inside the same VPC. These EC2 instances connect to the internet through a default route via the same NAT gateway. Each VPC subnet has its own route table.

The organization implemented a new security requirement after a recent security examination. Never allow the database instance to connect to the internet. A security engineer must perform this update promptly without interfering with the network traffic of the application servers.

How will the security engineer be able to comply with these requirements?

- A. Remove the existing NAT gateway
- B. Create a new NAT gateway that only the application server subnets can use.
- C. Configure the DB instance's inbound network ACL to deny traffic from the security group ID of the NAT gateway.
- D. Modify the route tables of the DB instance subnets to remove the default route to the NAT gateway.
- E. Configure the route table of the NAT gateway to deny connections to the DB instance subnets.

Answer: C

Explanation:

Each subnet has a route table, so modify the routing associated with DB instance subnets to prevent internet access.

NEW QUESTION 105

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 documentation¹, you can configure CloudTrail to deliver log files from multiple Regions to a single S3 bucket for a single account. To change an existing single-Region trail to log in all Regions, you must use the AWS CLI and add the `--is-multi-region-trail` option to the `update-trail` command². This will ensure that you log global service events and capture all management event activity in your account.

Option A is incorrect because creating a new CloudTrail trail for each Region will incur additional costs and increase operational overhead. Option B is incorrect because changing the S3 bucket to receive notifications will not affect the delivery of log files from other Regions. Option C is incorrect because creating a new CloudTrail trail that applies to all Regions will result in duplicate log files for the original Region and also incur additional costs.

NEW QUESTION 110

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

Which solution meets these criteria?

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

Answer: A

Explanation:

<https://awscli.amazonaws.com/v2/documentation/api/latest/reference/kms/import-key-material.html> `aws kms import-key-material \`

```
--key-id 1234abcd-12ab-34cd-56ef-1234567890ab \  
--encrypted-key-material fileb://EncryptedKeyMaterial.bin \  
--import-token fileb://ImportToken.bin \  
--expiration-model KEY_MATERIAL_EXPIRES \  
--valid-to 2021-09-21T19:00:00Z
```

The correct answer is A. A customer managed CMK that uses customer provided key material.

A customer managed CMK is a KMS key that you create, own, and manage in your AWS account. You have full control over the key configuration, permissions, rotation, and deletion. You can use a customer managed CMK to encrypt and decrypt data in AWS services that are integrated with AWS KMS, such as Amazon EBS¹.

A customer managed CMK can use either AWS provided key material or customer provided key material. AWS provided key material is generated by AWS KMS and never leaves the service unencrypted. Customer provided key material is generated outside of AWS KMS and imported into a customer managed CMK. You can specify an expiration date for the imported key material, after which the CMK becomes unusable until you reimport new key material².

To meet the criteria of automatically expiring the key material in 90 days, you need to use customer provided key material and set the expiration date accordingly. This way, you can ensure that the data encrypted with the CMK will not be accessible after 90 days unless you reimport new key material and re-encrypt the data. The other options are incorrect for the following reasons:

* B. A customer managed CMK that uses AWS provided key material does not expire automatically. You can enable automatic rotation of the key material every year, but this does not prevent access to the data encrypted with the previous key material. You would need to manually delete the CMK and its backing key material to make the data inaccessible³.

* C. An AWS managed CMK is a KMS key that is created, owned, and managed by an AWS service on your behalf. You have limited control over the key configuration, permissions, rotation, and deletion. You cannot use an AWS managed CMK to encrypt data in other AWS services or applications. You also cannot set an expiration date for the key material of an AWS managed CMK4.

* D. Operation system-native encryption that uses GnuPG is not a solution that uses AWS KMS. GnuPG is a command line tool that implements the OpenPGP standard for encrypting and signing data. It does not integrate with Amazon EBS or other AWS services. It also does not provide a way to automatically expire the key material used for encryption5.

References:

1: Customer Managed Keys - AWS Key Management Service 2: [Importing Key Material in AWS Key Management Service (AWS KMS) - AWS Key Management Service] 3: [Rotating Customer Master Keys - AWS Key Management Service] 4: [AWS Managed Keys - AWS Key Management Service] 5: The GNU Privacy Guard

NEW QUESTION 113

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

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

A)

Apply the following SCP:

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

B)

Apply the following SCP:

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

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

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

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

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

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

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E
- F. Option F

Answer: ACE

NEW QUESTION 114

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 119

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 122

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 125

A Systems Engineer is troubleshooting the connectivity of a test environment that includes a virtual security appliance deployed inline. In addition to using the virtual security appliance, the Development team wants to use security groups and network ACLs to accomplish various security requirements in the environment. What configuration is necessary to allow the virtual security appliance to route the traffic?

- A. Disable network ACLs.
- B. Configure the security appliance's elastic network interface for promiscuous mode.
- C. Disable the Network Source/Destination check on the security appliance's elastic network interface
- D. Place the security appliance in the public subnet with the internet gateway

Answer: C

Explanation:

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-eni.html#eni-basics> Source/destination checking "You must disable source/destination checks if the instance runs services such as network address translation, routing, or firewalls."

The correct answer is C. Disable the Network Source/Destination check on the security appliance's elastic network interface.

This answer is correct because disabling the Network Source/Destination check allows the virtual security appliance to route traffic that is not addressed to or from itself. By default, this check is enabled on all EC2 instances, and it prevents them from forwarding traffic that does not match their own IP or MAC addresses.

However, for a virtual security appliance that acts as a router or a firewall, this check needs to be disabled, otherwise it will drop the traffic that it is supposed to route12.

The other options are incorrect because:

- A. Disabling network ACLs is not a solution, because network ACLs are optional layers of security for the subnets in a VPC. They can be used to allow or deny traffic based on IP addresses and ports, but they do not affect the routing behavior of the virtual security appliance3.
- B. Configuring the security appliance's elastic network interface for promiscuous mode is not a solution, because promiscuous mode is a mode for a network interface that causes it to pass all traffic it receives to the CPU, rather than passing only the frames that it is programmed to receive. Promiscuous mode is normally used for packet sniffing or monitoring, but it does not enable the network interface to route traffic4.
- D. Placing the security appliance in the public subnet with the internet gateway is not a solution, because it does not address the routing issue of the virtual security appliance. The security appliance can be placed in either a public or a private subnet, depending on the network design and security requirements, but it still needs to have the Network Source/Destination check disabled to route traffic properly5.

References:

1: Enabling or disabling source/destination checks - Amazon Elastic Compute Cloud 2: Virtual security appliance - Wikipedia 3: Network ACLs - Amazon Virtual Private Cloud 4: Promiscuous mode - Wikipedia 5: NAT instances - Amazon Virtual Private Cloud

NEW QUESTION 129

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

How can a security engineer meet this requirement?

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

Answer: A

NEW QUESTION 132

A company's security engineer is developing an incident response plan to detect suspicious activity in an AWS account for VPC hosted resources. The security engineer needs to provide visibility for as many AWS Regions as possible.

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

- A. Turn on VPC Flow Logs for all VPCs in the account.
- B. Activate Amazon GuardDuty across all AWS Regions.
- C. Activate Amazon Detective across all AWS Regions.
- D. Create an Amazon Simple Notification Service (Amazon SNS) topic.
- E. Create an Amazon EventBridge rule that responds to findings and publishes the findings to the SNS topic.
- F. Create an AWS Lambda function.
- G. Create an Amazon EventBridge rule that invokes the Lambda function to publish findings to Amazon Simple Email Service (Amazon SES).

Answer: BD

Explanation:

To detect suspicious activity in an AWS account for VPC hosted resources, the security engineer needs to use a service that can monitor network traffic and API calls across all AWS Regions. Amazon GuardDuty is a threat detection service that can do this by analyzing VPC Flow Logs, AWS CloudTrail event logs, and DNS logs. By activating GuardDuty across all AWS Regions, the security engineer can provide visibility for as many regions as possible. GuardDuty generates findings that contain details about the potential threats detected in the account. To respond to these findings, the security engineer needs to create a mechanism that can notify the relevant stakeholders or take remedial actions. One way to do this is to use Amazon EventBridge, which is a serverless event bus service that can connect AWS services and third-party applications. By creating an EventBridge rule that responds to GuardDuty findings and publishes them to an Amazon Simple Notification Service (Amazon SNS) topic, the security engineer can enable subscribers of the topic to receive notifications via email, SMS, or other methods. This is a cost-effective solution that does not require any additional infrastructure or code.

NEW QUESTION 137

A business requires a forensic logging solution for hundreds of Docker-based apps running on Amazon EC2. The solution must analyze logs in real time, provide message replay, and persist logs.

Which Amazon Web Offerings (IAM) services should be employed to satisfy these requirements? (Select two.)

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

Answer: BD

NEW QUESTION 138

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 secret.
- B. Update the IAM principals in the role trust policy as required.

- C. Deploy a VPC endpoint for Secrets Manager
- D. Create and attach an endpoint policy that specifies the IAM principals that are allowed to access the secret
- E. Update the list of IAM principals as required.
- F. Use a tag-based approach by attaching a resource policy to the secret
- 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 explicitly
- J. Attach the policies to an IAM group
- K. Add all IAM principals to the IAM group
- L. Remove principals from the group when they need access
- M. Add the principals to the group again when access is no longer allowed.

Answer: C

NEW QUESTION 140

A company is using AWS Organizations to manage multiple accounts. The company needs to allow an IAM user to use a role to access resources that are in another organization's AWS account.

Which combination of steps must the company perform to meet this requirement? (Select TWO.)

- A. Create an identity policy that allows the sts: AssumeRole action in the AWS account that contains the resource
- B. Attach the identity policy to the IAM user.
- C. Ensure that the sts: AssumeRole action is allowed by the SCPs of the organization that owns the resources that the IAM user needs to access.
- D. Create a role in the AWS account that contains the resource
- E. Create an entry in the role's trust policy that allows the IAM user to assume the role
- F. Attach the trust policy to the role.
- G. Establish a trust relationship between the IAM user and the AWS account that contains the resources.
- H. Create a role in the IAM user's AWS account
- I. Create an identity policy that allows the sts: AssumeRole action
- J. Attach the identity policy to the role.

Answer: BC

Explanation:

To allow cross-account access to resources using IAM roles, the following steps are required:

- Create a role in the AWS account that contains the resources (the trusting account) and specify the AWS account that contains the IAM user (the trusted account) as a trusted entity in the role's trust policy. This allows users from the trusted account to assume the role and access resources in the trusting account.
- Ensure that the IAM user has permission to assume the role in their own AWS account. This can be done by creating an identity policy that allows the sts:AssumeRole action and attaching it to the IAM user or their group.
- Ensure that there are no service control policies (SCPs) in the organization that owns the resources that deny or restrict access to the sts:AssumeRole action or the role itself. SCPs are applied to all accounts in an organization and can override any permissions granted by IAM policies.

Verified References:

- <https://repost.aws/knowledge-center/cross-account-access-iam>
- https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_accounts_access.html
- https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial_cross-account-with-roles.html

NEW QUESTION 145

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

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

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

Answer: A

Explanation:

- Option A: This option meets the requirements of following security best practices and configuring sensitive database credentials in the CloudFormation template. A dynamic reference is a way to specify external values that are stored and managed in other services, such as Secrets Manager, in the stack templates¹. When using a dynamic reference, CloudFormation retrieves the value of the specified reference when necessary during stack and change set operations¹. Dynamic references can be used for certain resources that support them, such as AWS::RDS::DBInstance¹. By using a dynamic reference to reference the database credentials in Secrets Manager, the company can leverage the existing integration between these services and avoid hardcoding the secret information in the template. Secrets Manager is a service that helps you protect secrets needed to access your applications, services, and IT resources². Secrets Manager enables you to rotate, manage, and retrieve database credentials, API keys, and other secrets throughout their lifecycle².

NEW QUESTION 150

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 VP
- 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 Manage
- 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 connection¹. 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 endpoint².

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 instances³. 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 addresses².
- 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 instances⁴. 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 address⁴.
- 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 addresses⁵. 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 devices².

NEW QUESTION 154

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 157

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

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

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

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

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

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

Answer: C

Explanation:

The correct answer is C. Use AWS Resource Access Manager (AWS RAM) to share Account-A's VPC

subnets with the remaining member accounts. Configure the member accounts to use the shared subnets to launch workloads.

This answer is correct because AWS RAM is a service that helps you securely share your AWS resources across AWS accounts, within your organization or organizational units (OUs), and with IAM roles and users for supported resource types¹. One of the supported resource types is VPC subnets², which means you

can share the subnets in Account-A's VPC with the other member accounts using AWS RAM. This way, you can meet the requirements of using a centrally managed VPC, avoiding duplicate VPCs in each account, and launching workloads in shared subnets. You can also control the access to the shared subnets by using IAM policies and resource-based policies³, which can prevent one account from modifying another account's resources.

The other options are incorrect because:

- A. Using a CloudFormation template in the member accounts to launch workloads and using the Fn::ImportValue function to obtain the subnet ID values is not a solution, because Fn::ImportValue can only import values that have been exported by another stack within the same region⁴. This means that you cannot use Fn::ImportValue to reference the subnet IDs that are exported by Account-A's CloudFormation template, unless all the member accounts are in the same region as Account-A. This option also does not avoid creating duplicate VPCs in each account, which is one of the requirements.
- B. Using a transit gateway in the VPC within Account-A and configuring the member accounts to use the transit gateway to access the subnets in Account-A to launch workloads is not a solution, because a transit gateway does not allow you to launch workloads in another account's subnets. A transit gateway is a network transit hub that enables you to route traffic between your VPCs and on-premises networks⁵, but it does not enable you to share subnets across accounts.
- D. Creating a peering connection between Account-A and the remaining member accounts and configuring the member accounts to use the subnets in Account-A through the VPC peering connection to launch workloads is not a solution, because a VPC peering connection does not allow you to launch workloads in another account's subnets. A VPC peering connection is a networking connection between two VPCs that enables you to route traffic between them privately⁶, but it does not enable you to share subnets across accounts.

References:

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

NEW QUESTION 160

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