

Amazon-Web-Services

Exam Questions SCS-C02

AWS Certified Security - Specialty



NEW QUESTION 1

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

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

Answer: B

Explanation:

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

NEW QUESTION 2

A security engineer needs to create an Amazon S3 bucket policy to grant least privilege read access to IAM user accounts that are named User1, User2, and User3. These IAM user accounts are members of the AuthorizedPeople IAM group. The security engineer drafts the following S3 bucket policy:

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

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

A)

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

B)

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

C)

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

D)

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

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

Answer: A

NEW QUESTION 3

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

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

Answer: D

Explanation:

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

NEW QUESTION 4

A company stores sensitive documents in Amazon S3 by using server-side encryption with an IAM Key Management Service (IAM KMS) CMK. A new requirement mandates that the CMK that is used for these documents can be used only for S3 actions. Which statement should the company add to the key policy to meet this requirement?

A)

```
{
  "Effect": "Deny",
  "Principal": "*",
  "Action": "kms:*",
  "Resource": "*",
  "Condition": {
    "StringNotEquals": {
      "kms:CallerAccount": "s3.amazonaws.com"
    }
  }
}
```

B)

```
{
  "Effect": "Deny",
  "Principal": "*",
  "Action": "s3:*",
  "Resource": "*",
  "Condition": {
    "StringNotEquals": {
      "kms:ViaService": "kms.*amazonaws.com"
    }
  }
}
```

- A. Option A
- B. Option B

Answer: A

NEW QUESTION 5

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

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

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

Which solution meets these requirements?

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

Answer: C

Explanation:

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

a cron job.

NEW QUESTION 6

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

Which statement should the security specialist include in the policy?

- A.

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

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

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

```
{
  "Effect": "Deny",
  "Principal": "*",
  "Action": "s3:PutObject",
  "Resource": "arn:aws:s3:::reportbucket/*",
  "Condition": {
    "StringNotLikeIfExists": {
      "s3:x-amz-server-side-encryption-aws-kms-key-id": "arn:aws:kms:*:111122223333:key/*"
    }
  }
}
```
- E. Option A
F. Option B
G. Option C
H. Option D

Answer: D

NEW QUESTION 7

A company has several workloads running on AWS. Employees are required to authenticate using on-premises ADFS and SSO to access the AWS Management Console. Developers migrated an existing legacy web application to an Amazon EC2 instance. Employees need to access this application from anywhere on the internet, but currently, there is no authentication system built into the application.

How should the Security Engineer implement employee-only access to this system without changing the application?

- A. Place the application behind an Application Load Balancer (ALB). Use Amazon Cognito as authentication for the ALB.
B. Define a SAML-based Amazon Cognito user pool and connect it to ADFS.
C. Implement AWS SSO in the master account and link it to ADFS as an identity provide
D. Define the EC2 instance as a managed resource, then apply an IAM policy on the resource.
E. Define an Amazon Cognito identity pool, then install the connector on the Active Directory serve
F. Use the Amazon Cognito SDK on the application instance to authenticate the employees using their Active Directory user names and passwords.
G. Create an AWS Lambda custom authorizer as the authenticator for a reverse proxy on Amazon EC2. Ensure the security group on Amazon EC2 only allows access from the Lambda function.

Answer: A

Explanation:

<https://docs.aws.amazon.com/elasticloadbalancing/latest/application/listener-authenticate-users.html>

NEW QUESTION 8

A company's Chief Security Officer has requested that a Security Analyst review and improve the security posture of each company IAM account The Security

Analyst decides to do this by Improving IAM account root user security.

Which actions should the Security Analyst take to meet these requirements? (Select THREE.)

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

Answer: ADE

Explanation:

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

NEW QUESTION 9

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 10

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

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

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

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

- A. Create an AWS CloudFormation template that contains the 10 required AWS Config rule
- B. Deploy the template by using CloudFormation StackSets in the security-01 account.
- C. Create a conformance pack that contains the 10 required AWS Config rule
- D. Deploy the conformance pack from the security-01 account.
- E. Create a conformance pack that contains the 10 required AWS Config rule
- F. Deploy the conformance pack from the management-01 account.
- G. Create an AWS CloudFormation template that will activate AWS 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 13

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 For Security 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 17

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

Which solution will meet these requirements?

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

Answer: B

Explanation:

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

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

The other options are incorrect because:

➤ A. Turning on Insights events on the trail and configuring an alarm on the insight is not a solution, because Insights events are used to analyze unusual activity in management events, such as spikes in API call volume or error rates. Insights events do not capture failed sign-in attempts to the AWS Management Console.

➤ 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 22

An international company wants to combine AWS Security Hub findings across all the company's AWS Regions and from multiple accounts. In addition, the company

wants to create a centralized custom dashboard to correlate these findings with operational data for deeper analysis and insights. The company needs an analytics tool to search and visualize Security Hub findings. Which combination of steps will meet these requirements? (Select THREE.)

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

Answer: BDF

Explanation:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

NEW QUESTION 25

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 27

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

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

Answer: C

NEW QUESTION 31

A security engineer is troubleshooting an AWS Lambda function that is named MyLambdaFunction. The function is encountering an error when the function attempts to read the objects in an Amazon S3 bucket that is named DOC-EXAMPLE-BUCKET. The S3 bucket has the following bucket policy:

```
{
  "Effect": "Allow",
  "Principal": {
    "Service": "lambda.amazonaws.com"
  },
  "Action": "s3:GetObject",
  "Resource": "arn:aws:s3:::DOC-EXAMPLE-BUCKET",
  "Condition": {
    "ArnLike": {
      "aws:SourceArn": "arn:aws:lambda:::function:MyLambdaFunction"
    }
  }
}
```

Which change should the security engineer make to the policy to ensure that the Lambda function can read the bucket objects?

- A. Remove the Condition element
- B. Change the Principal element to the following: {"AWS": "arn "aws" ::: lambda ::: function:MyLambdaFunction"}
- C. Change the Action element to the following: " s3:GetObject*" " s3:GetBucket**"

D. Change the Resource element to "arn:aws:s3::DOC-EXAMPLE-BUCKET/*".

E. Change the Resource element to "arn:aws:lambda::function:MyLambdaFunction". Change the Principal element to the following:{"Service": "s3.amazonaws.com"}

Answer: C

Explanation:

The correct answer is C. Change the Resource element to "arn:aws:s3::DOC-EXAMPLE-BUCKET/*".

The reason is that the Resource element in the bucket policy specifies which objects in the bucket are affected by the policy. In this case, the policy only applies to the bucket itself, not the objects inside it. Therefore, the Lambda function cannot access the objects with the s3:GetObject permission. To fix this, the Resource element should include a wildcard (*) to match all objects in the bucket. This way, the policy grants the Lambda function permission to read any object in the bucket.

The other options are incorrect for the following reasons:

- A. Removing the Condition element would not help, because it only restricts access based on the source IP address of the request. The Principal element should not be changed to the Lambda function ARN, because it specifies who is allowed or denied access by the policy. The policy should allow access to any principal ("*") and rely on IAM roles or policies to control access to the Lambda function.
- B. Changing the Action element to include s3:GetBucket* would not help, because it would grant additional permissions that are not needed by the Lambda function, such as s3:GetBucketAcl or s3:GetBucketPolicy. The s3:GetObject* permission is sufficient for reading objects in the bucket.
- D. Changing the Resource element to the Lambda function ARN would not make sense, because it would mean that the policy applies to the Lambda function itself, not the bucket or its objects. The Principal element should not be changed to s3.amazonaws.com, because it would grant access to any AWS service that uses S3, not just Lambda.

NEW QUESTION 33

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 36

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

What is the FASTEST way for the security engineer to identify the federated user?

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

Answer: B

Explanation:

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

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

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

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

References:

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

NEW QUESTION 38

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": "sqs.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 39

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 43

What are the MOST secure ways to protect the AWS account root user of a recently opened AWS account? (Select TWO.)

- A. Use the AWS account root user access keys instead of the AWS Management Console.
- B. Enable multi-factor authentication for the AWS IAM users with the Adminis-tratorAccess managed policy attached to them.
- C. Enable multi-factor authentication for the AWS account root user.
- D. Use AWS KMS to encrypt all AWS account root user and AWS IAM access keys and set automatic rotation to 30 days.
- E. Do not create access keys for the AWS account root user; instead, create AWS IAM users.

Answer: CE

NEW QUESTION 45

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

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

Answer: C

NEW QUESTION 48

A company's public Application Load Balancer (ALB) recently experienced a DDoS attack. To mitigate this issue, the company deployed Amazon CloudFront in front of the ALB so that users would not directly access the Amazon EC2 instances behind the ALB.

The company discovers that some traffic is still coming directly into the ALB and is still being handled by the EC2 instances.

Which combination of steps should the company take to ensure that the EC2 instances will receive traffic only from CloudFront? (Choose two.)

- A. Configure CloudFront to add a cache key policy to allow a custom HTTP header that CloudFront sends to the ALB.
- B. Configure CloudFront to add a custom: HTTP header to requests that CloudFront sends to the ALB.
- C. Configure the ALB to forward only requests that contain the custom HTTP header.
- D. Configure the ALB and CloudFront to use the X-Forwarded-For header to check client IP addresses.
- E. Configure the ALB and CloudFront to use the same X.509 certificate that is generated by AWS Certificate Manager (ACM).

Answer: BC

Explanation:

To prevent users from directly accessing an Application Load Balancer and allow access only through CloudFront, complete these high-level steps: Configure CloudFront to add a custom HTTP header to requests that it sends to the Application Load Balancer. Configure the Application Load Balancer to only forward requests that contain the custom HTTP header. (Optional) Require HTTPS to improve the security of this solution.

<https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/restrict-access-to-load-balancer.html>

NEW QUESTION 50

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

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

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

Answer: BD

Explanation:

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

- B. Review the application security groups to ensure that only the necessary ports are open. This is a good practice to reduce the exposure of the EC2 instances to potential attacks from the Internet. Application security groups are a feature of Azure that allow you to group virtual machines and define network security policies based on those groups¹.

➤ D. Use Amazon Inspector to periodically scan the backend instances. This is a service that helps you to identify vulnerabilities and exposures in your EC2 instances and applications. Amazon Inspector can perform automated security assessments based on predefined or custom rules packages2.

NEW QUESTION 51

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 VP
- 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 54

A company's Security Team received an email notification from the Amazon EC2 Abuse team that one or more of the company's Amazon EC2 instances may have been compromised

Which combination of actions should the Security team take to respond to (be current modem? (Select TWO.)

- A. Open a support case with the IAM Security team and ask them to remove the malicious code from the affected instance
- B. Respond to the notification and list the actions that have been taken to address the incident
- C. Delete all IAM users and resources in the account
- D. Detach the internet gateway from the VPC remove aft rules that contain 0.0.0.0V0 from the security groups, and create a NACL rule to deny all traffic Inbound from the internet
- E. Delete the identified compromised instances and delete any associated resources that the Security team did not create.

Answer: DE

Explanation:

these are the recommended actions to take when you receive an abuse notice from AWS8. You should review the abuse notice to see what content or activity was reported and detach the internet gateway from the VPC to isolate the affected instances from the internet. You should also remove any rules that allow inbound traffic from 0.0.0.0/0 from the security groups and create a network access control list (NACL) rule to deny all traffic inbound from the internet. You should then delete the compromised instances and any associated resources that you did not create. The other options are either inappropriate or unnecessary for responding to the abuse notice.

NEW QUESTION 57

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

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

- F. Create a unique IAM role for each external account
- G. Create a trust policy that includes a condition that uses the sts:ExternalId condition key.

Answer: D

Explanation:

The correct answer is D.

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

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

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

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

NEW QUESTION 59

A company is using Amazon Elastic Container Service (Amazon ECS) to deploy an application that deals with sensitive data. During a recent security audit, the company identified a security issue in which Amazon RDS credentials were stored with the application code in the company's source code repository.

A security engineer needs to develop a solution to ensure that database credentials are stored securely and rotated periodically. The credentials should be accessible to the application only. The engineer also needs to prevent database administrators from sharing database credentials as plaintext with other teammates. The solution must also minimize administrative overhead.

Which solution meets these requirements?

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

Answer: D

Explanation:

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

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

NEW QUESTION 63

A company has multiple Amazon S3 buckets encrypted with customer-managed CMKs. Due to regulatory requirements, the keys must be rotated every year. The company's Security Engineer has enabled automatic key rotation for the CMKs; however, the company wants to verify that the rotation has occurred.

What should the Security Engineer do to accomplish this?

- A. Filter IAM CloudTrail logs for KeyRotation events
- B. Monitor Amazon CloudWatch Events for any IAM KMS CMK rotation events
- C. Using the IAM CLI
- D. run the IAM kms get-key-rotation-status operation with the --key-id parameter to check the CMK rotation date
- E. Use Amazon Athena to query IAM CloudTrail logs saved in an S3 bucket to filter Generate New Key events

Answer: C

Explanation:

the aws kms get-key-rotation-status command returns a boolean value that indicates whether automatic rotation of the customer master key (CMK) is enabled¹. This command also shows the date and time when the CMK was last rotated². The other options are not valid ways to check the CMK rotation status.

NEW QUESTION 64

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

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

Which solution meets these requirements?

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

- J. Use IAM Control Tower
- K. Modify the default Account Factory networking template to automatically associate new accounts with a centrally managed transit gateway and to create a default route to the transit gateway in the default route table
- L. Create an SCP that denies the AttachInternetGateway action
- M. Attach the SCP to all accounts except the security inspection account.
- N. Enable IAM Resource Access Manager (IAM RAM) for IAM Organization
- O. Create a shared transit gateway, and make it available by using an IAM RAM resource share
- P. Create an SCP that denies the CreateInternetGateway action
- Q. Attach the SCP to all accounts except the security inspection account
- R. Create routes in the route tables of all accounts that point to the shared transit gateway.

Answer: C

NEW QUESTION 66

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

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

Which solution will meet these requirements?

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

Answer: C

Explanation:

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

NEW QUESTION 70

A company is building a data processing application that uses AWS Lambda functions. The application's Lambda functions need to communicate with an Amazon RDS DB instance that is deployed within a VPC in the same AWS account.

Which solution meets these requirements in the MOST secure way?

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

Answer: C

Explanation:

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

References: : AWS Lambda Developer Guide

NEW QUESTION 72

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

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

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

Answer: BD

Explanation:

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

NEW QUESTION 74

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

Which solution meets these requirements?

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

Answer: A

Explanation:

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

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

NEW QUESTION 75

A company is using IAM Organizations. The company wants to restrict IAM usage to the eu-west-1 Region for all accounts under an OU that is named "development." The solution must persist restrictions to existing and new IAM accounts under the development OU.

- ☐ A. Include the following SCP on the development OU:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "DenyNonDefaultRegions",
      "Effect": "Deny",
      "NotAction": [
        <Desired Global Services> ],
      "Resource": "*",
      "Condition": {
        "StringNotEquals": {
          "aws:RequestedRegion": [
            "eu-west-1"
          ]
        },
        "ArnNotLike": {
          "aws:PrincipalARN": "arn:aws:iam::*:role/AWSExecution"
        }
      }
    }
  ]
}
```

- ☐ B. Include the following SCP on the development account:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "DenyNonDefaultRegions",
      "Effect": "Deny",
      "NotAction": [
        <Desired Global Services> ],
      "Resource": "*",
      "Condition": {
        "StringNotEquals": {
          "aws:RequestedRegion": [
            "eu-west-1"
          ]
        },
        "ArnNotLike": {
          "aws:PrincipalARN": "arn:aws:iam::*:role/AWSExecution"
        }
      }
    }
  ]
}
```

☐ C. Include the following SCP on the development OU

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "DenyNonDefaultRegions",
      "Effect": "Deny",
      "NotAction": [
        <Desired Global Services> ],
      "Resource": "*",
      "Condition": {
        "StringEquals": {
          "aws:RequestedRegion": [
            "eu-west-1"
          ]
        },
        "ArnNotLike": {
          "aws:PrincipalARN": "arn:aws:iam::*:role/AWSExecution"
        }
      }
    }
  ]
}
```

☐ D. Include the following SCP on the development OU

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "DenyNonDefaultRegions",
      "Effect": "Allow",
      "NotAction": [
        <Desired Global Services> ],
      "Resource": "*",
      "Condition": {
        "StringNotEquals": {
          "aws:RequestedRegion": [
            "us-east-1"
          ]
        },
        "ArnNotLike": {
          "aws:PrincipalARN": "arn:aws:iam::*:role/AWSExecution"
        }
      }
    }
  ]
}
```

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

Answer: A

NEW QUESTION 76

Which of the following bucket policies will ensure that objects being uploaded to a bucket called 'demo' are encrypted.
 Please select:

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

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

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

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

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

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

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

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

Answer: A

Explanation:

The condition of "s3:x-amz-server-side-encryption": "IAM:kms" ensures that objects uploaded need to be encrypted.

Options B,C and D are invalid because you have to ensure the condition of "s3:x-amz-server-side-encryption": "IAM:kms" is present

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

NEW QUESTION 78

A security engineer needs to run an AWS CloudFormation script. The CloudFormation script builds AWS infrastructure to support a stack that includes web servers and a MySQL database. The stack has been deployed in pre-production environments and is ready for production. The production script must comply with the principle of least privilege. Additionally, separation of duties must exist between the security engineer's IAM account and CloudFormation. Which solution will meet these requirements?

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

Answer: A

Explanation:

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

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

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

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

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

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

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

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

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

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

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

NEW QUESTION 79

A business stores website images in an Amazon S3 bucket. The firm serves the photos to end users through Amazon CloudFront. The firm learned lately that the photographs are being accessible from nations in which it does not have a distribution license.

Which steps should the business take to safeguard the photographs and restrict their distribution? (Select two.)

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

Answer: AC

Explanation:

For Enable Geo-Restriction, choose Yes. For Restriction Type, choose Whitelist to allow access to certain countries, or choose Blacklist to block access from certain countries. <https://IAM.amazon.com/premiumsupport/knowledge-center/cloudfront-geo-restriction/>

NEW QUESTION 81

A company is deploying an Amazon EC2-based application. The application will include a custom health-checking component that produces health status data in JSON format. A Security Engineer must implement a secure solution to monitor application availability in near-real time by analyzing the health status data. Which approach should the Security Engineer use?

- A. Use Amazon CloudWatch monitoring to capture Amazon EC2 and networking metrics. Visualize metrics using Amazon CloudWatch dashboards.
- B. Run the Amazon Kinesis Agent to write the status data to Amazon Kinesis Data Firehose. Store the streaming data from Kinesis Data Firehose in Amazon Redshift.

- C. (hen run a script on the pool data and analyze the data in Amazon Redshift
- D. Write the status data directly to a public Amazon S3 bucket from the health-checking component Configure S3 events to invoke an IAM Lambda function that analyzes the data
- E. Generate events from the health-checking component and send them to Amazon CloudWatch Events.Include the status data as event payload
- F. Use CloudWatch Events rules to invoke an IAM Lambda function that analyzes the data.

Answer: A

Explanation:

Amazon CloudWatch monitoring is a service that collects and tracks metrics from AWS resources and applications, and provides visualization tools and alarms to monitor performance and availability¹. The health status data in JSON format can be sent to CloudWatch as custom metrics², and then displayed in CloudWatch dashboards³. The other options are either inefficient or insecure for monitoring application availability in near-real time.

NEW QUESTION 84

You have an S3 bucket defined in IAM. You want to ensure that you encrypt the data before sending it across the wire. What is the best way to achieve this. Please select:

- A. Enable server side encryption for the S3 bucke
- B. This request will ensure that the data is encrypted first.
- C. Use the IAM Encryption CLI to encrypt the data first
- D. Use a Lambda function to encrypt the data before sending it to the S3 bucket.
- E. Enable client encryption for the bucket

Answer: B

Explanation:

One can use the IAM Encryption CLI to encrypt the data before sending it across to the S3 bucket. Options A and C are invalid because this would still mean that data is transferred in plain text Option D is invalid because you cannot just enable client side encryption for the S3 bucket For more information on Encrypting and Decrypting data, please visit the below URL:

<https://IAM.amazonaws.com/blogs/secuirv/how4o-encrvpt-and-decrypt-your-data-with-the-IAM-encryption-cl> The correct answer is: Use the IAM Encryption CLI to encrypt the data first Submit your Feedback/Queries to our Experts

NEW QUESTION 85

A security engineer needs to implement a solution to create and control the keys that a company uses for cryptographic operations. The security engineer must create symmetric keys in which the key material is generated and used within a custom key store that is backed by an AWS CloudHSM cluster. The security engineer will use symmetric and asymmetric data key pairs for local use within applications. The security engineer also must audit the use of the keys. How can the security engineer meet these requirements?

- A. To create the keys use AWS Key Management Service (AWS KMS) and the custom key stores with the CloudHSM cluste
- B. For auditing, use Amazon Athena
- C. To create the keys use Amazon S3 and the custom key stores with the CloudHSM cluste
- D. For auditing use AWS CloudTrail.
- E. To create the keys use AWS Key Management Service (AWS KMS) and the custom key stores with the CloudHSM cluste
- F. For auditing, use Amazon GuardDuty.
- G. To create the keys use AWS Key Management Service (AWS KMS) and the custom key stores with the CloudHSM cluste
- H. For auditing, use AWS CloudTrail.

Answer: D

Explanation:

AWS KMS supports asymmetric KMS keys that represent a mathematically related RSA, elliptic curve (ECC), or SM2 (China Regions only) public and private key pair. These key pairs are generated in AWS KMS hardware security modules certified under the FIPS 140-2 Cryptographic Module Validation Program, except in the China (Beijing) and China (Ningxia) Regions. The private key never leaves the AWS KMS HSMs unencrypted.

<https://docs.aws.amazon.com/kms/latest/developerguide/symmetric-asymmetric.html>

NEW QUESTION 87

A security engineer is designing a cloud architecture to support an application. The application runs on Amazon EC2 instances and processes sensitive information, including credit card numbers.

The application will send the credit card numbers to a component that is running in an isolated environment. The component will encrypt, store, and decrypt the numbers.

The component then will issue tokens to replace the numbers in other parts of the application.

The component of the application that manages the tokenization process will be deployed on a separate set of EC2 instances. Other components of the application must not be able to store or access the credit card numbers.

Which solution will meet these requirements?

- A. Use EC2 Dedicated Instances for the tokenization component of the application.
- B. Place the EC2 instances that manage the tokenization process into a partition placement group.
- C. Create a separate VP
- D. Deploy new EC2 instances into the separate VPC to support the data tokenization.
- E. Deploy the tokenization code onto AWS Nitro Enclaves that are hosted on EC2 instances.

Answer: D

Explanation:

AWS Nitro Enclaves are isolated and hardened virtual machines that run on EC2 instances and provide a secure environment for processing sensitive data. Nitro Enclaves have no persistent storage, interactive access, or external networking, and they can only communicate with the parent instance through a secure local channel. Nitro Enclaves also support cryptographic attestation, which allows verifying the identity and integrity of the enclave and its code. Nitro Enclaves are ideal for implementing data protection solutions such as tokenization, encryption, and key management.

Using Nitro Enclaves for the tokenization component of the application meets the requirements of isolating the sensitive data from other parts of the application, encrypting and storing the credit card numbers securely, and issuing tokens to replace the numbers. Other components of the application will not be able to access

or store the credit card numbers, as they are only available within the enclave.

NEW QUESTION 88

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

Which solution will meet these requirements?

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

Answer: C

Explanation:

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

NEW QUESTION 92

A company is operating a website using Amazon CloudFront. CloudFront servers some content from Amazon S3 and other from web servers running EC2 instances behind an Application Load Balancer (ALB). Amazon DynamoDB is used as the data store. The company already uses IAM Certificate Manager (ACM) to store a public TLS certificate that can optionally secure connections between the website users and CloudFront. The company has a new requirement to enforce end-to-end encryption in transit.

Which combination of steps should the company take to meet this requirement? (Select THREE.)

- A. Update the CloudFront distribution
- B. configuring it to optionally use HTTPS when connecting to origins on Amazon S3
- C. Update the web application configuration on the web servers to use HTTPS instead of HTTP when connecting to DynamoDB
- D. Update the CloudFront distribution to redirect HTTP requests to HTTPS
- E. Configure the web servers on the EC2 instances to listen using HTTPS using the public ACM TLS certificate Update the ALB to connect to the target group using HTTPS
- F. Update the ALB listen to listen using HTTPS using the public ACM TLS certificate
- G. Update the CloudFront distribution to connect to the HTTPS listener.
- H. Create a TLS certificate Configure the web servers on the EC2 instances to use HTTPS only with that certificate
- I. Update the ALB to connect to the target group using HTTPS.

Answer: BCE

Explanation:

To enforce end-to-end encryption in transit, the company should do the following:

- Update the web application configuration on the web servers to use HTTPS instead of HTTP when connecting to DynamoDB. This ensures that the data is encrypted when it travels from the web servers to the data store.
- Update the CloudFront distribution to redirect HTTP requests to HTTPS. This ensures that the viewers always use HTTPS when they access the website through CloudFront.
- Update the ALB to listen using HTTPS using the public ACM TLS certificate. Update the CloudFront distribution to connect to the HTTPS listener. This ensures that the data is encrypted when it travels from CloudFront to the ALB and from the ALB to the web servers.

NEW QUESTION 95

A company wants to configure DNS Security Extensions (DNSSEC) for the company's primary domain. The company registers the domain with Amazon Route 53. The company hosts the domain on Amazon EC2 instances by using BIND.

What is the MOST operationally efficient solution that meets this requirement?

- A. Set the dnssec-enable option to yes in the BIND configuration
- B. Create a zone-signing key (ZSK) and a key-signing key (KSK) Restart the BIND service.
- C. Migrate the zone to Route 53 with DNSSEC signing enable
- D. Create a zone-signing key (ZSK) and a key-signing key (KSK) that are based on an AWS Key Management Service (AWS KMS) customer managed key.
- E. Set the dnssec-enable option to yes in the BIND configuration
- F. Create a zone-signing key (ZSK) and a key-signing key (KSK). Run the dnssec-signzone command to generate a delegation signer (DS) record Use AWS Key Management Service (AWS KMS) to secure the keys.
- G. Create a zone-signing key (ZSK) and a key-signing key (KSK). Run the dnssec-signzone command to generate a delegation signer (DS) record Use AWS Key Management Service (AWS KMS) to secure the keys.
- H. Key Management Service (AWS KMS) to secure the keys.
- I. Migrate the zone to Route 53 with DNSSEC signing enable
- J. Create a key-signing key (KSK) that is based on an AWS Key Management Service (AWS KMS) customer managed key
- K. Add a delegation signer (DS) record to the parent zone.

Answer: D

Explanation:

To configure DNSSEC for a domain registered with Route 53, the most operationally efficient solution is to migrate the zone to Route 53 with DNSSEC signing enabled, create a key-signing key (KSK) that is based on an AWS Key Management Service (AWS KMS) customer managed key, and add a delegation signer (DS) record to the parent zone. This way, Route 53 handles the zone-signing key (ZSK) and the signing of the records in the hosted zone, and the customer only

needs to manage the KSK in AWS KMS and provide the DS record to the domain registrar. Option A is incorrect because it does not involve migrating the zone to Route 53, which would simplify the DNSSEC configuration. Option B is incorrect because it creates both a ZSK and a KSK based on AWS KMS customer managed keys, which is unnecessary and less efficient than letting Route 53 manage the ZSK. Option C is incorrect because it does not involve migrating the zone to Route 53, and it requires running the `dnssec-signzone` command manually, which is less efficient than letting Route 53 sign the zone automatically. Verified References:

- <https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/domain-configure-dnssec.html>
- <https://aws.amazon.com/about-aws/whats-new/2020/12/announcing-amazon-route-53-support-dnssec/>

NEW QUESTION 99

A company hosts an application on Amazon EC2 that is subject to specific rules for regulatory compliance. One rule states that traffic to and from the workload must be inspected for network-level attacks. This involves inspecting the whole packet. To comply with this regulatory rule, a security engineer must install intrusion detection software on a c5n.4xlarge EC2 instance. The engineer must then configure the software to monitor traffic to and from the application instances. What should the security engineer do next?

- A. Place the network interface in promiscuous mode to capture the traffic.
- B. Configure VPC Flow Logs to send traffic to the monitoring EC2 instance using a Network Load Balancer.
- C. Configure VPC traffic mirroring to send traffic to the monitoring EC2 instance using a Network Load Balancer.
- D. Use Amazon Inspector to detect network-level attacks and trigger an IAM Lambda function to send the suspicious packets to the EC2 instance.

Answer: D

NEW QUESTION 102

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

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

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

Answer: A

Explanation:

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

NEW QUESTION 106

A security team is using Amazon EC2 Image Builder to build a hardened AMI with forensic capabilities. An AWS Key Management Service (AWS KMS) key will encrypt the forensic AMI. EC2 Image Builder successfully installs the required patches and packages in the security team's AWS account. The security team uses a federated IAM role in the same AWS account to sign in to the AWS Management Console and attempts to launch the forensic AMI. The EC2 instance launches and immediately terminates.

What should the security team do to launch the EC2 instance successfully?

- A. Update the policy that is associated with the federated IAM role to allow the `ec2:DescribeImages` action for the forensic AMI.
- B. Update the policy that is associated with the federated IAM role to allow the `ec2:StartInstances` action in the security team's AWS account.
- C. Update the policy that is associated with the KMS key that is used to encrypt the forensic AMI
- D. Configure the policy to allow the `km`
- E. Encrypt and kms Decrypt actions for the federated IAM role.
- F. Update the policy that is associated with the federated IAM role to allow the `km`
- G. `DescribeKey` action for the KMS key that is used to encrypt the forensic AMI.

Answer: C

Explanation:

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/troubleshooting-launch.html#troubleshooting-launch-i>

NEW QUESTION 110

A company's security engineer has been tasked with restricting a contractor's IAM account access to the company's Amazon EC2 console without providing access to any other IAM services. The contractor's IAM account must not be able to gain access to any other IAM service, even if the IAM account is assigned additional permissions based on IAM group membership.

What should the security engineer do to meet these requirements?

- A. Create an IAM user policy that allows for Amazon EC2 access for the contractor's IAM user
- B. Create an IAM permissions boundary policy that allows Amazon EC2 access. Associate the contractor's IAM account with the IAM permissions boundary policy.
- C. Create an IAM group with an attached policy that allows for Amazon EC2 access. Associate the contractor's IAM account with the IAM group.
- D. Create an IAM role that allows for EC2 and explicitly denies all other services. Instruct the contractor to always assume this role.

Answer: B

Explanation:

To restrict the contractor's IAM account access to the EC2 console without providing access to any other AWS services, the security engineer should do the following:

- Create an IAM permissions boundary policy that allows EC2 access. This is a policy that defines the maximum permissions that an IAM entity can have.
- Associate the contractor's IAM account with the IAM permissions boundary policy. This means that even if the contractor's IAM account is assigned additional

permissions based on IAM group membership, those permissions are limited by the permissions boundary policy.

NEW QUESTION 112

An application is running on an Amazon EC2 instance that has an IAM role attached. The IAM role provides access to an AWS Key Management Service (AWS KMS) customer managed key and an Amazon S3 bucket. The key is used to access 2 TB of sensitive data that is stored in the S3 bucket.

A security engineer discovers a potential vulnerability on the EC2 instance that could result in the compromise of the sensitive data. Due to other critical operations, the security engineer cannot immediately shut down the EC2 instance for vulnerability patching.

What is the FASTEST way to prevent the sensitive data from being exposed?

- A. Download the data from the existing S3 bucket to a new EC2 instance
- B. Then delete the data from the S3 bucket
- C. Re-encrypt the data with a client-based key
- D. Upload the data to a new S3 bucket.
- E. Block access to the public range of S3 endpoint IP addresses by using a host-based firewall
- F. Ensure that internet-bound traffic from the affected EC2 instance is routed through the host-based firewall.
- G. Revoke the IAM role's active session permission
- H. Update the S3 bucket policy to deny access to the IAM role
- I. Remove the IAM role from the EC2 instance profile.
- J. Disable the current key
- K. Create a new KMS key that the IAM role does not have access to, and re-encrypt all the data with the new key
- L. Schedule the compromised key for deletion.

Answer: D

NEW QUESTION 117

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

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

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

Answer: BCF

Explanation:

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

- B. Configure a SAML identity provider in Amazon Cognito to map attributes to the Amazon Cognito user pool attributes. This is a necessary step to federate the existing users from the SAML identity provider to the Amazon Cognito user pool, which will be used for authentication and authorization¹.
 - C. Configure the SAML identity provider to add the Amazon Cognito user pool as a relying party. This is a necessary step to establish a trust relationship between the SAML identity provider and the Amazon Cognito user pool, which will allow the users to sign in using their existing credentials².
 - F. Update API Gateway to use a COGNITO_USER_POOLS authorizer. This is a necessary step to enable API Gateway to use the Amazon Cognito user pool as an authorizer for the RESTful services, which will validate the identity or access tokens that are issued by Amazon Cognito when a user signs in successfully³.
- The other options are incorrect because:
- A. Creating a custom authorization service using AWS Lambda is not a necessary step, because Amazon Cognito user pools can provide built-in authorization features, such as scopes and groups, that can be used to control access to API resources⁴.
 - D. Configuring an Amazon Cognito identity pool to integrate with social login providers is not a necessary step, because the users already exist in a directory that is exposed through a SAML identity provider, and there is no requirement to support social login providers⁵.
 - E. Updating DynamoDB to store the user email addresses and passwords is not a necessary step, because the user credentials are already stored in the SAML identity provider, and there is no need to duplicate them in DynamoDB⁶.

References:

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

NEW QUESTION 122

A security engineer is configuring a new website that is named example.com. The security engineer wants to secure communications with the website by requiring users to connect to example.com through HTTPS.

Which of the following is a valid option for storing SSL/TLS certificates?

- A. Custom SSL certificate that is stored in AWS Key Management Service (AWS KMS)
- B. Default SSL certificate that is stored in Amazon CloudFront.
- C. Custom SSL certificate that is stored in AWS Certificate Manager (ACM)
- D. Default SSL certificate that is stored in Amazon S3

Answer: C

NEW QUESTION 126

A company has a group of Amazon EC2 instances in a single private subnet of a VPC with no internet gateway attached. A security engineer has installed the Amazon CloudWatch agent on all instances in that subnet to capture logs from a specific application. To ensure that the logs flow securely, the company's networking team has created VPC endpoints for CloudWatch monitoring and CloudWatch logs. The networking team has attached the endpoints to the VPC. The application is generating logs. However, when the security engineer queries CloudWatch, the logs do not appear.

Which combination of steps should the security engineer take to troubleshoot this issue? (Choose three.)

- A. Ensure that the EC2 instance profile that is attached to the EC2 instances has permissions to create log streams and write logs.
- B. Create a metric filter on the logs so that they can be viewed in the AWS Management Console.
- C. Check the CloudWatch agent configuration file on each EC2 instance to make sure that the CloudWatch agent is collecting the proper log files.
- D. Check the VPC endpoint policies of both VPC endpoints to ensure that the EC2 instances have permissions to use them.
- E. Create a NAT gateway in the subnet so that the EC2 instances can communicate with CloudWatch.
- F. Ensure that the security groups allow all the EC2 instances to communicate with each other to aggregate logs before sending.

Answer: ACD

Explanation:

The possible steps to troubleshoot this issue are:

- A. Ensure that the EC2 instance profile that is attached to the EC2 instances has permissions to create log streams and write logs. This is a necessary step because the CloudWatch agent uses the credentials from the instance profile to communicate with CloudWatch¹.
- C. Check the CloudWatch agent configuration file on each EC2 instance to make sure that the CloudWatch agent is collecting the proper log files. This is a necessary step because the CloudWatch agent needs to know which log files to monitor and send to CloudWatch².
- D. Check the VPC endpoint policies of both VPC endpoints to ensure that the EC2 instances have permissions to use them. This is a necessary step because the VPC endpoint policies control which principals can access the AWS services through the endpoints³.

The other options are incorrect because:

- B. Creating a metric filter on the logs is not a troubleshooting step, but a way to extract metric data from the logs. Metric filters do not affect the visibility of the logs in the AWS Management Console.
- E. Creating a NAT gateway in the subnet is not a solution, because the EC2 instances do not need internet access to communicate with CloudWatch through the VPC endpoints. A NAT gateway would also incur additional costs.
- F. Ensuring that the security groups allow all the EC2 instances to communicate with each other is not a necessary step, because the CloudWatch agent does not require log aggregation before sending. Each EC2 instance can send its own logs independently to CloudWatch.

References:

1: IAM Roles for Amazon EC2 2: CloudWatch Agent Configuration File: Logs Section 3: Using Amazon VPC Endpoints : Metric Filters : NAT Gateways : CloudWatch Agent Reference: Log Aggregation

NEW QUESTION 127

A systems engineer deployed containers from several custom-built images that an application team provided through a QA workflow. The systems engineer used Amazon Elastic Container Service (Amazon ECS) with the Fargate launch type as the target platform. The system engineer now needs to collect logs from all containers into an existing Amazon CloudWatch log group. Which solution will meet this requirement?

- A. Turn on the awslogs log driver by specifying parameters for awslogs-group and awslogs-region in the LogConfiguration property.
- B. Download and configure the CloudWatch agent on the container instances.
- C. Set up Fluent Bit and FluentD as a DaemonSet to send logs to Amazon CloudWatch Logs.
- D. Configure an IAM policy that includes the `CreateLogGroup` action. Assign the policy to the container instances.

Answer: A

Explanation:

The AWS documentation states that you can use the awslogs log driver to send log information to CloudWatch Logs. To use this method, you specify the parameters for awslogs-group and awslogs-region in the LogConfiguration property of the container definition. This method is the easiest way to send logs to CloudWatch Logs.

References: : Amazon Elastic Container Service Developer Guide

NEW QUESTION 128

A company uses AWS Signer with all of the company's AWS Lambda functions. A developer recently stopped working for the company. The company wants to ensure that all the code that the developer wrote can no longer be deployed to the Lambda functions. Which solution will meet this requirement?

- A. Revoke all versions of the signing profile assigned to the developer.
- B. Examine the developer's IAM role.
- C. Remove all permissions that grant access to Signer.
- D. Re-encrypt all source code with a new AWS Key Management Service (AWS KMS) key.
- E. Use Amazon CodeGuru to profile all the code that the Lambda functions use.

Answer: A

Explanation:

The correct answer is A. Revoke all versions of the signing profile assigned to the developer.

According to the AWS documentation¹, AWS Signer is a fully managed code-signing service that helps you ensure the trust and integrity of your code. You can use Signer to sign code artifacts, such as Lambda deployment packages, with code-signing certificates that you control and manage.

A signing profile is a collection of settings that Signer uses to sign your code artifacts. A signing profile includes information such as the following:

- The type of signature that you want to create (for example, a code-signing signature).
- The signing algorithm that you want Signer to use to sign your code.
- The code-signing certificate and its private key that you want Signer to use to sign your code.

You can create multiple versions of a signing profile, each with a different code-signing certificate. You can also revoke a version of a signing profile if you no longer want to use it for signing code artifacts.

In this case, the company wants to ensure that all the code that the developer wrote can no longer be deployed to the Lambda functions. One way to achieve this is to revoke all versions of the signing profile that was assigned to the developer. This will prevent Signer from using that signing profile to sign any new code artifacts, and also invalidate any existing signatures that were created with that signing profile. This way, the company can ensure that only trusted and authorized code can be deployed to the Lambda functions.

The other options are incorrect because:

- B. Examining the developer's IAM roles and removing all permissions that grant access to Signer may not be sufficient to prevent the deployment of the developer's code. The developer may have already signed some code artifacts with a valid signing profile before leaving the company, and those signatures may

still be accepted by Lambda unless the signing profile is revoked.

➤ C. Re-encrypting all source code with a new AWS Key Management Service (AWS KMS) key may not be effective or practical. AWS KMS is a service that lets you create and manage encryption keys for your data. However, Lambda does not require encryption keys for deploying code artifacts, only valid signatures from Signer. Therefore, re-encrypting the source code may not prevent the deployment of the developer's code if it has already been signed with a valid signing profile. Moreover, re-encrypting all source code may be time-consuming and disruptive for other developers who are working on the same code base.

➤ D. Using Amazon CodeGuru to profile all the code that the Lambda functions use may not help with preventing the deployment of the developer's code. Amazon CodeGuru is a service that provides intelligent recommendations to improve your code quality and identify an application's most expensive lines of code. However, CodeGuru does not perform any security checks or validations on your code artifacts, nor does it interact with Signer or Lambda in any way. Therefore, using CodeGuru may not prevent unauthorized or untrusted code from being deployed to the Lambda functions.

References:

1: What is AWS Signer? - AWS Signer

NEW QUESTION 133

A company is using AWS to run a long-running analysis process on data that is stored in Amazon S3 buckets. The process runs on a fleet of Amazon EC2 instances that are in an Auto Scaling group. The EC2 instances are deployed in a private subnet Of a VPC that does not have internet access. The EC2 instances and the S3 buckets are in the same AWS account

The EC2 instances access the S3 buckets through an S3 gateway endpoint that has the default access policy. Each EC2 instance is associated With an instance profile role that has a policy that explicitly allows the s3:GetObject action and the s3:PutObject action for only the required S3 buckets.

The company learns that one or more of the EC2 instances are compromised and are exfiltrating data to an S3 bucket that is outside the companys organization in AWS Organizations. A security engtneer must implement a solution to stop this exfiltration of data and to keep the EC2 processing job functional.

Which solution will meet these requirements?

- A. Update the policy on the S3 gateway endpoint to allow the S3 actions CY11y if the values of the aws:ResourceOrgID and aws:PrincipalOrgID condition keys match the companys values.
- B. Update the policy on the instance profile role to allow the S3 actions only if the value of the aws:ResourceOrgID condition key matches the company's value.
- C. Add a network ACL rule to the subnet of the EC2 instances to block outgoing connections on port 443.
- D. Apply an SCP on the AWS account to allow the \$3 actions only if the values of the aws:ResourceOrgID and aws:PrincipalOrgID condition keys match the company's values.

Answer: D

Explanation:

The correct answer is D.

To stop the data exfiltration from the compromised EC2 instances, the security engineer needs to implement a solution that can deny access to any S3 bucket that is outside the company's organization. The solution should also allow the EC2 instances to access the required S3 buckets within the company's organization for the analysis process.

Option A is incorrect because updating the policy on the S3 gateway endpoint will not affect the access to S3 buckets that are outside the company's organization. The S3 gateway endpoint only applies to S3 buckets that are in the same AWS Region as the VPC. The compromised EC2 instances can still access S3 buckets in other Regions or other AWS accounts through the internet gateway or NAT device.

Option B is incorrect because updating the policy on the instance profile role will not prevent the compromised EC2 instances from using other credentials or methods to access S3 buckets outside the company's organization. The instance profile role only applies to requests that are made using the credentials of that role. The compromised EC2 instances can still use other IAM users, roles, or access keys to access S3 buckets outside the company's organization.

Option C is incorrect because adding a network ACL rule to block outgoing connections on port 443 will also block legitimate connections to S3 buckets within the company's organization. The network ACL rule will prevent the EC2 instances from accessing any S3 bucket through HTTPS, regardless of whether it is inside or outside the company's organization.

Option D is correct because applying an SCP on the AWS account will effectively deny access to any S3 bucket that is outside the company's organization. The SCP will apply to all IAM users, roles, and resources in the AWS account, regardless of how they access S3. The SCP will use the aws:ResourceOrgID and aws:PrincipalOrgID condition keys to check whether the S3 bucket and the principal belong to the same organization as the AWS account. If they do not match, the SCP will deny the S3 actions.

References:

- Using service control policies
- AWS Organizations service control policy examples

NEW QUESTION 136

A company has an AWS account that hosts a production application. The company receives an email notification that Amazon GuardDuty has detected an Impact:IAMUser/AnomalousBehavior finding in the account. A security engineer needs to run the investigation playbook for this security incident and must collect and analyze the information without affecting the application.

Which solution will meet these requirements MOST quickly?

- A. Log in to the AWS account by using read-only credential
- B. Review the GuardDuty finding for details about the IAM credentials that were use
- C. Use the IAM console to add a DenyAll policy to the IAM principal.
- D. Log in to the AWS account by using read-only credential
- E. Review the GuardDuty finding to determine which API calls initiated the findin
- F. Use Amazon Detective to review the API calls in context.
- G. Log in to the AWS account by using administrator credential
- H. Review the GuardDuty finding for details about the IAM credentials that were use
- I. Use the IAM console to add a DenyAll policy to the IAM principal.
- J. Log in to the AWS account by using read-only credential
- K. Review the GuardDuty finding to determinewhich API calls initiated the findin
- L. Use AWS CloudTrail Insights and AWS CloudTrail Lake to review the API calls in context.

Answer: B

Explanation:

This answer is correct because logging in with read-only credentials minimizes the risk of accidental or malicious changes to the AWS account. Reviewing the GuardDuty finding can help identify which API calls initiated the finding and which IAM principal was involved. Using Amazon Detective can help analyze and visualize the API calls in context, such as which resources were affected, which IP addresses were used, and how the activity deviated from normal patterns. Amazon Detective can also help identify related findings from other sources, such as AWS Config or AWS Audit Manager.

NEW QUESTION 138

A company's AWS CloudTrail logs are all centrally stored in an Amazon S3 bucket. The security team controls the company's AWS account. The security team must prevent unauthorized access and tampering of the CloudTrail logs. Which combination of steps should the security team take? (Choose three.)

- A. Configure server-side encryption with AWS KMS managed encryption keys (SSE-KMS)
- B. Compress log file with secure gzip.
- C. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to notify the security team of any modifications on CloudTrail log files.
- D. Implement least privilege access to the S3 bucket by configuring a bucket policy.
- E. Configure CloudTrail log file integrity validation.
- F. Configure Access Analyzer for S3.

Answer: ADE

NEW QUESTION 142

A company has two VPCs in the same AWS Region and in the same AWS account. Each VPC uses a CIDR block that does not overlap with the CIDR block of the other VPC. One VPC contains AWS Lambda functions that run inside a subnet that accesses the internet through a NAT gateway. The Lambda functions require access to a publicly accessible Amazon Aurora MySQL database that is running in the other VPC.

A security engineer determines that the Aurora database uses a security group rule that allows connections from the NAT gateway IP address that the Lambda functions use. The company's security policy states that no database should be publicly accessible.

What is the MOST secure way that the security engineer can provide the Lambda functions with access to the Aurora database?

- A. Move the Aurora database into a private subnet that has no internet access routes in the database's current VPC. Configure the Lambda functions to use the Aurora database's new private IP address to access the database. Configure the Aurora database's security group to allow access from the private IP addresses of the Lambda functions.
- B. Establish a VPC endpoint between the two VPCs in the Aurora database's VPC. Configure a service VPC endpoint for Amazon RDS in the Lambda functions' VPC. Configure an interface VPC endpoint that uses the service endpoint in the Aurora database's VPC. Configure the service endpoint to allow connections from the Lambda functions.
- C. Establish an AWS Direct Connect interface between the VPCs. Configure the Lambda functions to use a new route table that accesses the Aurora database through the Direct Connect interface. Configure the Aurora database's security group to allow access from the Direct Connect interface IP address.
- D. Move the Lambda functions into a public subnet in their VPC. Move the Aurora database into a private subnet in its VPC. Configure the Lambda functions to use the Aurora database's new private IP address to access the database. Configure the Aurora database to allow access from the public IP addresses of the Lambda functions.

Answer: B

Explanation:

This option involves creating a VPC Endpoint between the two VPCs that allows private communication between them without going through the internet or exposing any public IP addresses. In this option, a VPC endpoint for Amazon RDS will be established, and an interface VPC endpoint will be created that points to the service endpoint in the Aurora database's VPC. This way, the Lambda functions can use the private IP address of the Aurora database to access it through the VPC endpoint without exposing any public IP addresses or allowing public internet access to the database.

NEW QUESTION 145

A company has a web-based application using Amazon CloudFront and running on Amazon Elastic Container Service (Amazon ECS) behind an Application Load Balancer (ALB). The ALB is terminating TLS and balancing load across ECS service tasks. A security engineer needs to design a solution to ensure that application content is accessible only through CloudFront and that it is never accessible directly.

How should the security engineer build the MOST secure solution?

- A. Add an origin custom header. Set the viewer protocol policy to HTTP and HTTPS. Set the origin protocol policy to HTTPS only. Update the application to validate the CloudFront custom header.
- B. Add an origin custom header. Set the viewer protocol policy to HTTPS only. Set the origin protocol policy to match viewer. Update the application to validate the CloudFront custom header.
- C. Add an origin custom header. Set the viewer protocol policy to redirect HTTP to HTTPS. Set the origin protocol policy to HTTP only. Update the application to validate the CloudFront custom header.
- D. Add an origin custom header. Set the viewer protocol policy to redirect HTTP to HTTP.
- E. Set the origin protocol policy to HTTPS only. Update the application to validate the CloudFront custom header.

Answer: D

Explanation:

To ensure that application content is accessible only through CloudFront and not directly, the security engineer should do the following:

- Add an origin custom header. This is a header that CloudFront adds to the requests that it sends to the origin, but viewers cannot see or modify.
- Set the viewer protocol policy to redirect HTTP to HTTPS. This ensures that the viewers always use HTTPS when they access the website through CloudFront.
- Set the origin protocol policy to HTTPS only. This ensures that CloudFront always uses HTTPS when it connects to the origin.
- Update the application to validate the CloudFront custom header. This means that the application checks if the request has the custom header and only responds if it does. Otherwise, it denies or ignores the request. This prevents users from bypassing CloudFront and accessing the content directly on the origin.

NEW QUESTION 149

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