

Exam Questions SCS-C02

AWS Certified Security - Specialty

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NEW QUESTION 1

An AWS account that is used for development projects has a VPC that contains two subnets. The first subnet is named public-subnet-1 and has the CIDR block 192.168.1.0/24 assigned. The other subnet is named private-subnet-2 and has the CIDR block 192.168.2.0/24 assigned. Each subnet contains Amazon EC2 instances.

Each subnet is currently using the VPC's default network ACL. The security groups that the EC2 instances in these subnets use have rules that allow traffic between each instance where required. Currently, all network traffic flow is working as expected between the EC2 instances that are using these subnets.

A security engineer creates a new network ACL that is named subnet-2-NACL with default entries. The security engineer immediately configures private-subnet-2 to use the new network ACL and makes no other changes to the infrastructure. The security engineer starts to receive reports that the EC2 instances in public-subnet-1 and public-subnet-2 cannot communicate with each other.

Which combination of steps should the security engineer take to allow the EC2 instances that are running in these two subnets to communicate again? (Select TWO.)

- A. Add an outbound allow rule for 192.168.2.0/24 in the VPC's default network ACL.
- B. Add an inbound allow rule for 192.168.2.0/24 in the VPC's default network ACL.
- C. Add an outbound allow rule for 192.168.2.0/24 in subnet-2-NACL.
- D. Add an inbound allow rule for 192.168.1.0/24 in subnet-2-NACL.
- E. Add an outbound allow rule for 192.168.1.0/24 in subnet-2-NACL.

Answer: CE

Explanation:

The AWS documentation states that you can add an outbound allow rule for 192.168.2.0/24 in

subnet-2-NACL and add an outbound allow rule for 192.168.1.0/24 in subnet-2-NACL. This will allow the EC2 instances that are running in these two subnets to communicate again.

References: : Amazon VPC User Guide

NEW QUESTION 2

A security engineer needs to develop a process to investigate and respond to potential security events on a company's Amazon EC2 instances. All the EC2 instances are backed by Amazon Elastic Block Store (Amazon EBS). The company uses AWS Systems Manager to manage all the EC2 instances and has installed Systems Manager Agent (SSM Agent) on all the EC2 instances.

The process that the security engineer is developing must comply with AWS security best practices and must meet the following requirements:

- A compromised EC2 instance's volatile memory and non-volatile memory must be preserved for forensic purposes.
- A compromised EC2 instance's metadata must be updated with corresponding incident ticket information.
- A compromised EC2 instance must remain online during the investigation but must be isolated to prevent the spread of malware.
- Any investigative activity during the collection of volatile data must be captured as part of the process. Which combination of steps should the security engineer take to meet these requirements with the LEAST operational overhead? (Select THREE.)

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

Answer: ACE

NEW QUESTION 3

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 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 hosts a public website on an Amazon EC2 instance. HTTPS traffic must be able to access the website. The company uses SSH for management of the web server.

The website is on the subnet 10.0.1.0/24. The management subnet is 192.168.100.0/24. A security engineer must create a security group for the EC2 instance. Which combination of steps should the security engineer take to meet these requirements in the MOST secure manner? (Select TWO.)

- A. Allow port 22 from source 0.0.0.0/0.

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

Answer: BC

Explanation:

The correct answer is B and C.

* B. Allow port 443 from source 0.0.0.0/0.

This is correct because port 443 is used for HTTPS traffic, which must be able to access the website from any source IP address.

* C. Allow port 22 from 192.168.100.0/24.

This is correct because port 22 is used for SSH, which is the management protocol for the web server. The management subnet is 192.168.100.0/24, so only this subnet should be allowed to access port 22.

* A. Allow port 22 from source 0.0.0.0/0.

This is incorrect because it would allow anyone to access port 22, which is a security risk. SSH should be restricted to the management subnet only.

* D. Allow port 22 from 10.0.1.0/24.

This is incorrect because it would allow the website subnet to access port 22, which is unnecessary and a security risk. SSH should be restricted to the management subnet only.

* E. Allow port 443 from 10.0.1.0/24.

This is incorrect because it would limit the HTTPS traffic to the website subnet only, which defeats the purpose of having a public website.

NEW QUESTION 6

A company developed an application by using AWS Lambda, Amazon S3, Amazon Simple Notification Service (Amazon SNS), and Amazon DynamoDB. An external application puts objects into the company's S3 bucket and tags the objects with date and time. A Lambda function periodically pulls data from the company's S3 bucket based on date and time tags and inserts specific values into a DynamoDB table for further processing.

The data includes personally identifiable information (PII). The company must remove data that is older than 30 days from the S3 bucket and the DynamoDB table.

Which solution will meet this requirement with the MOST operational efficiency?

- A. Update the Lambda function to add a TTL S3 flag to S3 object
- B. Create an S3 Lifecycle policy to expire objects that are older than 30 days by using the TTL S3 flag.
- C. Create an S3 Lifecycle policy to expire objects that are older than 30 day
- D. Update the Lambda function to add the TTL attribute in the DynamoDB tabl
- E. Enable TTL on the DynamoDB table to expire entires that are older than 30 days based on the TTL attribute.
- F. Create an S3 Lifecycle policy to expire objects that are older than 30 days and to add all prefixes to the S3 bucke
- G. Update the Lambda function to delete entries that are older than 30 days.
- H. Create an S3 Lifecycle policy to expire objects that are older than 30 days by using object tag
- I. Update the Lambda function to delete entries that are older than 30 days.

Answer: B

NEW QUESTION 7

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

Which solution meets these requirements?

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

Answer: A

NEW QUESTION 8

An AWS account administrator created an IAM group and applied the following managed policy to require that each individual user authenticate using multi-factor authentication:


```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "ec2:*",
      "Resource": "*"
    },
    {
      "Sid": "BlockAnyAccessUnlessSignedInWithMFA",
      "Effect": "Deny",
      "Action": "ec2:*",
      "Resource": "*",
      "Condition": {
        "BoolIfExists": {
          "aws:MultiFactorAuthPresent": false
        }
      }
    }
  ]
}
```

After implementing the policy, the administrator receives reports that users are unable to perform Amazon EC2 commands using the AWS CLI. What should the administrator do to resolve this problem while still enforcing multi-factor authentication?

- A. Change the value of aws:MultiFactorAuthPresent to true.
- B. Instruct users to run the aws sts get-session-token CLI command and pass the multi-factor authentication --serial-number and --token-code parameter
- C. Use these resulting values to make API/CLI calls.
- D. Implement federated API/CLI access using SAML 2.0, then configure the identity provider to enforce multi-factor authentication.
- E. Create a role and enforce multi-factor authentication in the role trust policy
- F. Instruct users to run the sts assume-role CLI command and pass --serial-number and --token-code parameter
- G. Store the resulting values in environment variable
- H. Add sts:AssumeRole to NotAction in the policy.

Answer: B

Explanation:

The correct answer is B. Instruct users to run the aws sts get-session-token CLI command and pass the multi-factor authentication --serial-number and --token-code parameters. Use these resulting values to make API/CLI calls.

According to the AWS documentation¹, the aws sts get-session-token CLI command returns a set of temporary credentials for an AWS account or IAM user. The credentials consist of an access key ID, a secret access key, and a security token. These credentials are valid for the specified duration only. The session duration for IAM users can be between 15 minutes and 36 hours, with a default of 12 hours.

You can use the --serial-number and --token-code parameters to provide the MFA device serial number and the MFA code from the device. The MFA device must be associated with the user who is making the get-session-token call. If you do not provide these parameters when your IAM user or role has a policy that requires MFA, you will receive an Access Denied error. The temporary security credentials that are returned by the get-session-token command can then be used to make subsequent API or CLI calls that require MFA authentication. You can use environment variables or a profile in your AWS CLI configuration file to specify the temporary credentials.

Therefore, this solution will resolve the problem of users being unable to perform EC2 commands using the AWS CLI, while still enforcing MFA.

The other options are incorrect because:

- A. Changing the value of aws:MultiFactorAuthPresent to true will not work, because this is a condition key that is evaluated by AWS when a request is made. You cannot set this value manually in your policy or request. You must provide valid MFA information to AWS for this condition key to be true.
- C. Implementing federated API/CLI access using SAML 2.0 may work, but it requires more operational effort than using the get-session-token command. You would need to configure a SAML identity provider and trust relationship with AWS, and use a custom SAML client to request temporary credentials from AWS STS. This solution may also introduce additional security risks if the identity provider is compromised.
- D. Creating a role and enforcing MFA in the role trust policy may work, but it also requires more operational effort than using the get-session-token command. You would need to create a role for each user or group that needs to perform EC2 commands, and specify a trust policy that requires MFA. You would also need to grant the users permission to assume the role, and instruct them to use the sts assume-role command instead of the get-session-token command.

References:

1: get-session-token — AWS CLI Command Reference

NEW QUESTION 9

A company is hosting a web application on Amazon EC2 instances behind an Application Load Balancer (ALB). The application has become the target of a DoS attack. Application logging shows that requests are coming from small number of client IP addresses, but the addresses change regularly.

The company needs to block the malicious traffic with a solution that requires the least amount of ongoing effort.

Which solution meets these requirements?

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

Answer: A

NEW QUESTION 10

A security engineer wants to forward custom application-security logs from an Amazon EC2 instance to Amazon CloudWatch. The security engineer installs the CloudWatch agent on the EC2 instance and adds the path of the logs to the CloudWatch configuration file. However, CloudWatch does not receive the logs. The security engineer verifies that the awslogs service is running on the EC2 instance.

What should the security engineer do next to resolve the issue?

- A. Add AWS CloudTrail to the trust policy of the EC2 instance
- B. Send the custom logs to CloudTrail instead of CloudWatch.
- C. Add Amazon S3 to the trust policy of the EC2 instance
- D. Configure the application to write the custom logs to an S3 bucket that CloudWatch can use to ingest the logs.
- E. Add Amazon Inspector to the trust policy of the EC2 instance
- F. Use Amazon Inspector instead of the CloudWatch agent to collect the custom logs.
- G. Attach the CloudWatchAgentServerPolicy AWS managed policy to the EC2 instance role.

Answer: D

Explanation:

The correct answer is D. Attach the CloudWatchAgentServerPolicy AWS managed policy to the EC2 instance role.

According to the AWS documentation¹, the CloudWatch agent is a software agent that you can install on your EC2 instances to collect system-level metrics and logs. To use the CloudWatch agent, you need to attach an IAM role or user to the EC2 instance that grants permissions for the agent to perform actions on your behalf. The CloudWatchAgentServerPolicy is an AWS managed policy that provides the necessary permissions for the agent to write metrics and logs to CloudWatch². By attaching this policy to the EC2 instance role, the security engineer can resolve the issue of CloudWatch not receiving the custom application-security logs.

The other options are incorrect for the following reasons:

- A. Adding AWS CloudTrail to the trust policy of the EC2 instance is not relevant, because CloudTrail is a service that records API activity in your AWS account, not custom application logs³. Sending the custom logs to CloudTrail instead of CloudWatch would not meet the requirement of forwarding them to CloudWatch.
- B. Adding Amazon S3 to the trust policy of the EC2 instance is not necessary, because S3 is a storage service that does not require any trust relationship with EC2 instances⁴. Configuring the application to write the custom logs to an S3 bucket that CloudWatch can use to ingest the logs would be an alternative solution, but it would be more complex and costly than using the CloudWatch agent directly.
- C. Adding Amazon Inspector to the trust policy of the EC2 instance is not helpful, because Inspector is a service that scans EC2 instances for software vulnerabilities and unintended network exposure, not custom application logs⁵. Using Amazon Inspector instead of the CloudWatch agent would not meet the requirement of forwarding them to CloudWatch.

References:

1: Collect metrics, logs, and traces with the CloudWatch agent - Amazon CloudWatch 2: CloudWatchAgentServerPolicy - AWS Managed Policy 3: What Is AWS CloudTrail? - AWS CloudTrail 4: Amazon S3 FAQs - Amazon Web Services 5: Automated Software Vulnerability Management - Amazon Inspector - AWS

NEW QUESTION 10

A company plans to use AWS Key Management Service (AWS KMS) to implement an encryption strategy to protect data at rest. The company requires client-side encryption for company projects. The company is currently conducting multiple projects to test the company's use of AWS KMS. These tests have led to a sudden increase in the company's AWS resource consumption. The test projects include applications that issue multiple requests each second to KMS endpoints for encryption activities.

The company needs to develop a solution that does not throttle the company's ability to use AWS KMS. The solution must improve key usage for client-side encryption and must be cost optimized. Which solution will meet these requirements?

- A. Use keyrings with the AWS Encryption SD
- B. Use each keyring individually or combine keyrings into a multi-keyring
- C. Decrypt the data by using a keyring that has the primary key in the multi-keyring.
- D. Use data key caching
- E. Use the local cache that the AWS Encryption SDK provides with a caching cryptographic materials manager.
- F. Use KMS key rotation
- G. Use a local cache in the AWS Encryption SDK with a caching cryptographic materials manager.
- H. Use keyrings with the AWS Encryption SD
- I. Use each keyring individually or combine keyrings into a multi-keyring
- J. Use any of the wrapping keys in the multi-keyring to decrypt the data.

Answer: B

Explanation:

The correct answer is B. Use data key caching. Use the local cache that the AWS Encryption SDK provides with a caching cryptographic materials manager.

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

The other options are incorrect because:

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

References:

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

NEW QUESTION 11

A web application gives users the ability to log in verify their membership's validity and browse artifacts that are stored in an Amazon S3 bucket. When a user attempts to download an object, the application must verify the permission to access the object and allow the user to download the object from a custom domain name such as example.com.

What is the MOST secure way for a security engineer to implement this functionality?

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

Answer: D

Explanation:

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

NEW QUESTION 12

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

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

Answer: C

Explanation:

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

NEW QUESTION 17

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 AL
- 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 22

A company uses SAML federation to grant users access to AWS accounts. A company workload that is in an isolated AWS account runs on immutable infrastructure with no human access to Amazon EC2. The company requires a specialized user known as a break glass user to have access to the workload AWS account and instances in the case of SAML errors. A recent audit discovered that the company did not create the break glass user for the AWS account that contains the workload.

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

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

Answer: AE

Explanation:

The combination of solutions that will meet the requirements are:

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

The other options are incorrect because:

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

References:

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

NEW QUESTION 25

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

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

Answer: D

Explanation:

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

NEW QUESTION 26

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

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

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

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

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

Answer: AD

NEW QUESTION 30

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

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

- A. Review the cross-account role permissions and the S3 bucket policy Verify that the Amazon S3 block public access option in the member account is deactivated.
- B. Review the role permissions m the master account and ensure it has sufficient privileges to perform S3 operations

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

Answer: DE

Explanation:

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

NEW QUESTION 31

A company that uses AWS Organizations wants to see AWS Security Hub findings for many AWS accounts and AWS Regions. Some of the accounts are in the company's organization, and some accounts are in organizations that the company manages for customers. Although the company can see findings in the Security Hub administrator account for accounts in the company's organization, there are no findings from accounts in other organizations. Which combination of steps should the company take to see findings from accounts that are outside the organization that includes the Security Hub administrator account? (Select TWO.)

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

Answer: CE

Explanation:

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

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

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

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

Verified References:

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

NEW QUESTION 32

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

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

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

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

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

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

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

- D. Tag each IAM role with a Team tag ke
 E. and use the team name in the tag valu
 F. Create an IAM policy similar to the one that follows, and attach 4 to all the IAM roles used by developers.

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

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

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

Answer: A

NEW QUESTION 37

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

Which solution will meet these requirements?

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

Answer: A

NEW QUESTION 39

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

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

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

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

Answer: AC

Explanation:

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

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

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

NEW QUESTION 41

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

Please select:

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

Answer: C

Explanation:

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

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

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

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

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

NEW QUESTION 44

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

- A. The target instance's security group does not allow traffic from the NLB.
- B. The target instance's security group is not attached to the NLB.

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

Answer: ACD

NEW QUESTION 46

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

How can the security engineer implement this solution?

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

Answer: C

NEW QUESTION 51

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

A.

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

B. A computer code with black text Description automatically generated

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

C. A computer code with black text Description automatically generated


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

D. A computer code with text Description automatically generated

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

Answer: C

Explanation:

https://docs.aws.amazon.com/IAM/latest/UserGuide/reference_policies_examples_aws_deny-requested-region.h

NEW QUESTION 54

A developer is building a serverless application hosted on AWS that uses Amazon Redshift as a data store. The application has separate modules for readwrite and read-only functionality. The modules need their own database users for compliance reasons. Which combination of steps should a security engineer implement to grant appropriate access? (Select TWO.)

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

Answer: A

Explanation:

To grant appropriate access to separate modules for read-write and read-only functionality in a serverless application hosted on AWS that uses Amazon Redshift as a data store, a security engineer should configure cluster security groups for each application module to control access to database users that are required for read-only and readwrite, and configure an IAM policy for each module specifying the ARN of an IAM user that allows the GetClusterCredentials API call.

References: : Amazon Redshift - Amazon Web Services : Amazon Redshift - Amazon Web Services : Identity and Access Management - AWS Management Console : AWS Identity and Access Management - AWS Management Console

NEW QUESTION 56

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

- A. Enable AWS Security Hub in the AWS account.
- B. Enable Amazon GuardDuty in the AWS account.

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

Answer: BCE

NEW QUESTION 58

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

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

Answer: A

NEW QUESTION 59

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

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

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

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

Answer: C

Explanation:

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

NEW QUESTION 60

A startup company is using a single AWS account that has resources in a single AWS Region. A security engineer configures an AWS CloudTrail trail in the same Region to deliver log files to an Amazon S3 bucket by using the AWS CLI.

Because of expansion, the company adds resources in multiple Regions. The security engineer notices that the logs from the new Regions are not reaching the S3 bucket.

What should the security engineer do to fix this issue with the LEAST amount of operational overhead?

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

Answer: D

Explanation:

The correct answer is D. Change the existing CloudTrail trail so that it applies to all Regions.

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

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

NEW QUESTION 61

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 66

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

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

- A. Use AD Connector to create users and groups for all employees that require access to IAM accounts. Assign AD Connector groups to IAM accounts and link to the IAM roles in accordance with the employees' job functions and access requirements. Instruct employees to access IAM accounts by using the IAM Directory Service user portal.
- B. Use an IAM SSO default directory to create users and groups for all employees that require access to IAM account.
- C. Assign groups to IAM accounts and link to permission sets in accordance with the employees' job functions and access requirement.
- D. Instruct employees to access IAM accounts by using the IAM SSO user portal.
- E. Use an IAM SSO default directory to create users and groups for all employees that require access to IAM account.

- F. Link IAM SSO groups to the IAM users present in all accounts to inherit existing permission
- G. Instruct employees to access IAM accounts by using the IAM SSO user portal.
- H. Use IAM Directory Service for Microsoft Active Directory to create users and groups for all employees that require access to IAM accounts Enable IAM Management Console access in the created directory and specify IAM SSO as a source of information for integrated accounts and permission set
- I. Instruct employees to access IAM accounts by using the IAM Directory Service user portal.

Answer: B

NEW QUESTION 67

A company is undergoing a layer 3 and layer 4 DDoS attack on its web servers running on IAM.
Which combination of IAM services and features will provide protection in this scenario? (Select THREE).

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

Answer: DEF

NEW QUESTION 72

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

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

Answer: A

NEW QUESTION 75

A company's security engineer is developing an incident response plan to detect suspicious activity in an AWS account for VPC hosted resources. The security engineer needs to provide visibility for as many AWS Regions as possible.
Which combination of steps will meet these requirements MOST cost-effectively? (Select TWO.)

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

Answer: BD

Explanation:

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

NEW QUESTION 77

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 AdministratorAccess 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 82

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

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

Answer: C

Explanation:

To protect the sensitive data against any data breach and minimize management overhead, the security engineer should recommend the following solution:

- Enable Amazon RDS encryption to encrypt the database and snapshots. This allows the security engineer to use AWS Key Management Service (AWS KMS) to encrypt data at rest for the database and any backups or replicas.
- Enable Amazon Elastic Block Store (Amazon EBS) encryption on Amazon EC2 instances. This allows the security engineer to use AWS KMS to encrypt data at rest for the EC2 instances and any snapshots or volumes.
- Store the database credentials in AWS Secrets Manager with automatic rotation. This allows the security engineer to encrypt and manage secrets centrally, and to configure automatic rotation schedules for them.
- Set up TLS for the connection to the RDS hosted database. This allows the security engineer to encrypt data in transit between the EC2 instances and the database.

NEW QUESTION 87

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

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

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

Answer: BC

Explanation:

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

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

Verified References:

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

NEW QUESTION 90

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

- A. Place the RDS instance in a public subnet and an IAM Lambda function outside the VPC
- B. Schedule the Lambda function to run every 3 months to rotate the secrets.
- C. Place the RDS instance in a private subnet and an IAM Lambda function inside the VPC in the private subnet
- D. Configure the private subnet to use a NAT gateway
- E. Schedule the Lambda function to run every 3 months to rotate the secrets.
- F. Place the RDS instance in a private subnet and an IAM Lambda function outside the VPC
- G. Configure the private subnet to use an internet gateway
- H. Schedule the Lambda function to run every 3 months to rotate the secrets.
- I. Place the RDS instance in a private subnet and an IAM Lambda function inside the VPC in the private subnet
- J. Schedule the Lambda function to run quarterly to rotate the secrets.
- K. Place the RDS instance in a private subnet and an IAM Lambda function inside the VPC in the private subnet

- L. Configure a Secrets Manager interface endpoint
- M. Schedule the Lambda function to run every 3 months to rotate the secrets.

Answer: BE

Explanation:

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

NEW QUESTION 94

A company accidentally deleted the private key for an Amazon Elastic Block Store (Amazon EBS)-backed Amazon EC2 instance. A security engineer needs to regain access to the instance.

Which combination of steps will meet this requirement? (Choose two.)

- A. Stop the instance
- B. Detach the root volum
- C. Generate a new key pair.
- D. Keep the instance runnin
- E. Detach the root volum
- F. Generate a new key pair.
- G. When the volume is detached from the original instance, attach the volume to another instance as a data volum
- H. Modify the authorized_keys file with a new public ke
- I. Move the volume back to the original instanc
- J. Start the instance.
- K. When the volume is detached from the original instance, attach the volume to another instance as a data volum
- L. Modify the authorized_keys file with a new private ke
- M. Move the volume back to the original instanc
- N. Start the instance.
- O. When the volume is detached from the original instance, attach the volume to another instance as a data volum
- P. Modify the authorized_keys file with a new public ke
- Q. Move the volume back to the original instance that is running.

Answer: AC

Explanation:

If you lose the private key for an EBS-backed instance, you can regain access to your instance. You must stop the instance, detach its root volume and attach it to another instance as a data volume, modify the authorized_keys file with a new public key, move the volume back to the original instance, and restart the instance.
<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/TroubleshootingInstancesConnecting.html#replacing>

NEW QUESTION 97

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 98

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

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

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

Answer: A

Explanation:

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

NEW QUESTION 101

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 104

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 106

During a manual review of system logs from an Amazon Linux EC2 instance, a Security Engineer noticed that there are sudo commands that were never properly alerted or reported on the Amazon CloudWatch Logs agent

Why were there no alerts on the sudo commands?

- A. There is a security group blocking outbound port 80 traffic that is preventing the agent from sending the logs
- B. The IAM instance profile on the EC2 instance was not properly configured to allow the CloudWatchLogs agent to push the logs to CloudWatch

- C. CloudWatch Logs status is set to ON versus SECURE, which prevents it from pulling in OS security event logs
- D. The VPC requires that all traffic go through a proxy, and the CloudWatch Logs agent does not support a proxy configuration.

Answer: B

Explanation:

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

NEW QUESTION 107

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

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

Which solution meets these requirements?

- A. Use IAM Control Towe
- B. Modify the default Account Factory networking template to automatically associate new accounts with a centrally managed VPC through a VPC peering connection and to create a default route to the VPC peer in the default route tabl
- C. Create an SCP that denies the CreateInternetGateway actio
- D. Attach the SCP to all accounts except the security inspection account.
- E. Create a centrally managed VPC in the security inspection accoun
- F. Establish VPC peering connections between the security inspection account and other account
- G. Instruct account owners to create default routes in their account route tables that point to the VPC pee
- H. Create an SCP that denies theAttach InternetGateway actio
- I. Attach the SCP to all accounts except the security inspection account.
- J. Use IAM Control Towe
- K. Modify the default Account Factory networking template to automatically associate new accounts with a centrally managed transitgateway and to create a default route to the transit gateway in the default route tabl
- L. Create an SCP that denies the AttachInternetGateway actio
- M. Attach the SCP to all accounts except the security inspection account.
- N. Enable IAM Resource Access Manager (IAM RAM) for IAM Organization
- O. Create a shared transit gateway, and make it available by using an IAM RAM resource shar
- P. Create an SCP that denies the CreateInternetGateway actio
- Q. Attach the SCP to all accounts except the security inspection accoun
- R. Create routes in the route tables of all accounts that point to the shared transit gateway.

Answer: C

NEW QUESTION 108

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

Which bucket policy statement meets these requirements?

- A. A computer code with black text Description automatically generated

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

- B. A computer code with black text Description automatically generated


```
"Statement": [
  {
    "Sid": "Access-to-specific-VPCE-only",
    "Principal": "*",
    "Action": "s3:*",
    "Effect": "Deny",
    "Resource": ["arn:aws:s3::DOC-EXAMPLE-BUCKET",
                  "arn:aws:s3::DOC-EXAMPLE-BUCKET/*"],
    "Condition": {
      "StringNotEquals": {
        "aws:sourceVpce": "vpce-la2b3c4d"
      }
    }
  }
]
```

C. A computer code with black text Description automatically generated

```
"Statement": [
  {
    "Sid": "Access-to-specific-VPCE-only",
    "Principal": "*",
    "Action": "s3:*",
    "Effect": "Deny",
    "Resource": ["arn:aws:s3::DOC-EXAMPLE-BUCKET",
                  "arn:aws:s3::DOC-EXAMPLE-BUCKET/*"],
    "Condition": {
      "StringEquals": {
        "aws:sourceVpce": "vpce-la2b3c4d"
      }
    }
  }
]
```

D. A computer code with black text Description automatically generated

```
"Statement": [
  {
    "Sid": "Access-to-specific-VPCE-only",
    "Principal": "*",
    "Action": "s3:*",
    "Effect": "Allow",
    "Resource": ["arn:aws:s3::DOC-EXAMPLE-BUCKET",
                  "arn:aws:s3::DOC-EXAMPLE-BUCKET/*"],
    "Condition": {
      "StringEquals": {
        "aws:sourceVpce": "vpce-la2b3c4d"
      }
    }
  }
]
```

Answer: B

Explanation:

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

NEW QUESTION 111

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 112

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

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

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

Answer: D

Explanation:

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

The other options are incorrect because:

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

NEW QUESTION 116

A company uses Amazon API Gateway to present REST APIs to users. An API developer wants to analyze API access patterns without the need to parse the log files.

Which combination of steps will meet these requirements with the LEAST effort? (Select TWO.)

- A. Configure access logging for the required API stage.
- B. Configure an AWS CloudTrail trail destination for API Gateway event
- C. Configure filters on the userIdentity, userAgent, and sourceIPAddress fields.
- D. Configure an Amazon S3 destination for API Gateway log
- E. Run Amazon Athena queries to analyze API access information.
- F. Use Amazon CloudWatch Logs Insights to analyze API access information.
- G. Select the Enable Detailed CloudWatch Metrics option on the required API stage.

Answer: CD

NEW QUESTION 119

A company has an AWS account that includes an Amazon S3 bucket. The S3 bucket uses server-side encryption with AWS KMS keys (SSE-KMS) to encrypt all the objects at rest by using a customer managed key. The S3 bucket does not have a bucket policy.

An IAM role in the same account has an IAM policy that allows s3 List* and s3 Get* permissions for the S3 bucket. When the IAM role attempts to access an object in the S3 bucket the role receives an access denied message.

Why does the IAM role not have access to the objects that are in the S3 bucket?

- A. The IAM role does not have permission to use the KMS CreateKey operation.
- B. The S3 bucket lacks a policy that allows access to the customer managed key that encrypts the objects.
- C. The IAM role does not have permission to use the customer managed key that encrypts the objects that are in the S3 bucket.
- D. The ACL of the S3 objects does not allow read access for the objects when the objects are encrypted at rest.

Answer: C

Explanation:

When using server-side encryption with AWS KMS keys (SSE-KMS), the requester must have both Amazon S3 permissions and AWS KMS permissions to access the objects. The Amazon S3 permissions are for the bucket and object operations, such as s3:ListBucket and s3:GetObject. The AWS KMS permissions are for the key operations, such as kms:GenerateDataKey and kms:Decrypt. In this case, the IAM role has the necessary Amazon S3 permissions, but not the AWS KMS permissions to use the customer managed key that encrypts the objects. Therefore, the IAM role receives an access denied message when trying to access the objects. Verified References:

- <https://docs.aws.amazon.com/AmazonS3/latest/userguide/troubleshoot-403-errors.html>
- <https://repost.aws/knowledge-center/s3-access-denied-error-kms>
- <https://repost.aws/knowledge-center/cross-account-access-denied-error-s3>

NEW QUESTION 121

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

Which solution will meet these requirements?

- A. Configure the permissions on the individual files in the S3 bucket so that only the CloudFront distribution has access to them.

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

Answer: B

NEW QUESTION 124

A development team is using an IAM Key Management Service (IAM KMS) CMK to try to encrypt and decrypt a secure string parameter from IAM Systems Manager Parameter Store. However, the development team receives an error message on each attempt. Which issues that are related to the CMK could be reasons for the error? (Select TWO.)

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

Answer: AD

NEW QUESTION 128

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 132

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 135

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

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

- A. Deploy an AWS Config managed rule to run on a periodic basis of 24 hour
- B. Select the access-keys-rotated managed rule, and set the maxAccessKeyAge parameter to 90 day
- C. Create an Amazon EventBridge (Amazon CloudWatch Events) rule with an event pattern that matches the compliance type of NON_COMPLIANT from AWS Config for the managed rule
- D. Configure EventBridge (CloudWatch Events) to send an Amazon Simple Notification Service (Amazon SNS) notification to the security team.
- E. Create a script to export a .csv file from the AWS Trusted Advisor check for IAM access key rotation. Load the script into an AWS Lambda function that will upload the .csv file to an Amazon S3 bucket
- F. Create an Amazon Athena table query that runs when the .csv file is uploaded to the S3 bucket
- G. Publish the results for any keys older than 90 days by using an invocation of an Amazon Simple Notification Service (Amazon SNS) notification to the security team.
- H. Create a script to download the IAM credentials report on a periodic basis
- I. Load the script into an AWS Lambda function that will run on a schedule through Amazon EventBridge (Amazon CloudWatch Events). Configure the Lambda script to load the report into memory and to filter the report for records in which the key was last rotated at least 90 days ago
- J. If any records are detected, send an Amazon Simple Notification Service (Amazon SNS) notification to the security team.
- K. Create an AWS Lambda function that queries the IAM API to list all the users
- L. Iterate through the users by using the ListAccessKeys operation
- M. Verify that the value in the CreateDate field is not at least 90 days old
- N. Send an Amazon Simple Notification Service (Amazon SNS) notification to the security team if the value is at least 90 days old
- O. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to schedule the Lambda function to run each day.

Answer: A

NEW QUESTION 138

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

Which statement in the KMS key policy will meet these requirements?

A)

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

B)

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

C)

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

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

Answer: A

NEW QUESTION 141

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 145

You need to create a policy and apply it for just an individual user. How could you accomplish this in the right way?

Please select:

- A. Add an IAM managed policy for the user
- B. Add a service policy for the user
- C. Add an IAM role for the user
- D. Add an inline policy for the user

Answer: D

Explanation:

Options A and B are incorrect since you need to add an inline policy just for the user. Option C is invalid because you don't assign an IAM role to a user.

The IAM Documentation mentions the following:

An inline policy is a policy that's embedded in a principal entity (a user, group, or role)—that is, the policy is an inherent part of the principal entity. You can create a policy and embed it in a principal entity, either when you create the principal entity or later.

For more information on IAM Access and Inline policies, just browse to the below URL: <https://docs.IAM.amazon.com/IAM/latest/UserGuide/access>

The correct answer is: Add an inline policy for the user. Submit your Feedback/Queries to our Experts

NEW QUESTION 148

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 150

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

Which S3 bucket policy will meet this requirement?

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

D. A screenshot of a computer code Description automatically generated


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

Answer: B

Explanation:

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

NEW QUESTION 151

A company's security engineer is designing an isolation procedure for Amazon EC2 instances as part of an incident response plan. The security engineer needs to isolate a target instance to block any traffic to and from the target instance, except for traffic from the company's forensics team. Each of the company's EC2 instances has its own dedicated security group. The EC2 instances are deployed in subnets of a VPC. A subnet can contain multiple instances.

The security engineer is testing the procedure for EC2 isolation and opens an SSH session to the target instance. The procedure starts to simulate access to the target instance by an attacker. The security engineer removes the existing security group rules and adds security group rules to give the forensics team access to the target instance on port 22.

After these changes, the security engineer notices that the SSH connection is still active and usable. When the security engineer runs a ping command to the public IP address of the target instance, the ping command is blocked.

What should the security engineer do to isolate the target instance?

- A. Add an inbound rule to the security group to allow traffic from 0.0.0.0/0 for all port
- B. Add an outbound rule to the security group to allow traffic to 0.0.0.0/0 for all port
- C. Then immediately delete these rules.
- D. Remove the port 22 security group rule
- E. Attach an instance role policy that allows AWS Systems Manager Session Manager connections so that the forensics team can access the target instance.
- F. Create a network ACL that is associated with the target instance's subnet
- G. Add a rule at the top of the inbound rule set to deny all traffic from 0.0.0.0/0. Add a rule at the top of the outbound rule set to deny all traffic to 0.0.0.0/0.
- H. Create an AWS Systems Manager document that adds a host-level firewall rule to block all inbound traffic and outbound traffic
- I. Run the document on the target instance.

Answer: C

NEW QUESTION 156

An international company has established a new business entity in South Korea. The company also has established a new AWS account to contain the workload for the South Korean region. The company has set up the workload in the new account in the ap-northeast-2 Region. The workload consists of three Auto Scaling groups of Amazon EC2 instances. All workloads that operate in this Region must keep system logs and application logs for 7 years.

A security engineer must implement a solution to ensure that no logging data is lost for each instance during scaling activities. The solution also must keep the logs for only the required period of 7 years.

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

- A. Ensure that the Amazon CloudWatch agent is installed on all the EC2 instances that the Auto Scaling groups launch
- B. Generate a CloudWatch agent configuration file to forward the required logs to Amazon CloudWatch Logs.
- C. Set the log retention for desired log groups to 7 years.
- D. Attach an IAM role to the launch configuration or launch template that the Auto Scaling groups use. Configure the role to provide the necessary permissions to forward logs to Amazon CloudWatch Logs.
- E. Attach an IAM role to the launch configuration or launch template that the Auto Scaling groups use. Configure the role to provide the necessary permissions to forward logs to Amazon S3.
- F. Ensure that a log forwarding application is installed on all the EC2 instances that the Auto Scaling groups launch
- G. Configure the log forwarding application to periodically bundle the logs and forward the logs to Amazon S3.
- H. Configure an Amazon S3 Lifecycle policy on the target S3 bucket to expire objects after 7 years.

Answer: ABC

Explanation:

The correct combination of steps that the security engineer should take to meet these requirements are A. Ensure that the Amazon CloudWatch agent is installed on all the EC2 instances that the Auto Scaling groups launch. Generate a CloudWatch agent configuration file to forward the required logs to Amazon CloudWatch Logs., B. Set the log retention for desired log groups to 7 years., and C. Attach an IAM role to the launch configuration or launch template that the Auto Scaling groups use. Configure the role to provide the necessary permissions to forward logs to Amazon CloudWatch Logs.

* A. This answer is correct because it meets the requirement of ensuring that no logging data is lost for each instance during scaling activities. By installing the CloudWatch agent on all the EC2 instances, the security engineer can collect and send system logs and application logs to CloudWatch Logs, which is a service that stores and monitors log data. By generating a CloudWatch agent configuration file, the security engineer can specify which logs to forward and how often.

* B. This answer is correct because it meets the requirement of keeping the logs for only the required period of 7 years. By setting the log retention for desired log groups, the security engineer can control how long CloudWatch Logs retains log events before deleting them. The security engineer can choose a predefined retention period of 7 years, or use a custom value.

* C. This answer is correct because it meets the requirement of providing the necessary permissions to forward logs to CloudWatch Logs. By attaching an IAM role to the launch configuration or launch template that the Auto Scaling groups use, the security engineer can grant permissions to the EC2 instances that are

launched by the Auto Scaling groups. By configuring the role to provide the necessary permissions, such as cloudwatch:PutLogEvents and cloudwatch:CreateLogStream, the security engineer can allow the EC2 instances to send log data to CloudWatch Logs.

NEW QUESTION 158

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

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

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

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

How should the security engineer correct the error?

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

Answer: D

Explanation:

CloudWatchLogsReadOnlyAccess doesn't include "logs:CreateLogStream" but it includes "logs:Get*"

<https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/iam-identity-based-access-control-cwl.html#:~:te>

NEW QUESTION 162

A company needs to encrypt all of its data stored in Amazon S3. The company wants to use IAM Key Management Service (IAM KMS) to create and manage its encryption keys. The company's security policies require the ability to Import the company's own key material for the keys, set an expiration date on the keys, and delete keys immediately, if needed.

How should a security engineer set up IAM KMS to meet these requirements?

- A. Configure IAM KMS and use a custom key stor
- B. Create a customer managed CMK with no key material Import the company's keys and key material into the CMK
- C. Configure IAM KMS and use the default Key store Create an IAM managed CMK with no key material Import the company's key material into the CMK
- D. Configure IAM KMS and use the default key store Create a customer managed CMK with no key material import the company's key material into the CMK
- E. Configure IAM KMS and use a custom key stor
- F. Create an IAM managed CMK with no key material.Import the company's key material into the CMK.

Answer: A

Explanation:

To meet the requirements of importing their own key material, setting an expiration date on the keys, and deleting keys immediately, the security engineer should do the following:

- Configure AWS KMS and use a custom key store. This allows the security engineer to use a key manager outside of AWS KMS that they own and manage, such as an AWS CloudHSM cluster or an external key manager.
- Create a customer managed CMK with no key material. Import the company's keys and key material into the CMK. This allows the security engineer to use their own key material for encryption and decryption operations, and to specify an expiration date for it.

NEW QUESTION 164

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