

Amazon

Exam Questions AWS-Certified-Security-Specialty

Amazon AWS Certified Security - Specialty



NEW QUESTION 1

A company deploys a set of standard IAM roles in AWS accounts. The IAM roles are based on job functions within the company. To balance operational efficiency and security, a security engineer implemented AWS Organizations SCPs to restrict access to critical security services in all company accounts.

All of the company's accounts and OUs within AWS Organizations have a default FullAWSAccess SCP that is attached. The security engineer needs to ensure that no one can disable Amazon GuardDuty and AWS Security Hub. The security engineer also must not override other permissions that are granted by IAM policies that are defined in the accounts.

Which SCP should the security engineer attach to the root of the organization to meet these requirements?

A. `"Version": "2012-10-17",
"Statement": [`

```
{  
  "Effect": "Deny",  
  "Action": [  
    "guardduty:DeleteDetector",  
    "guardduty:UpdateDetector",  
    "securityhub:DisableSecurityHub"  
  ],  
  "Resource": [  
    "*"   
  ]  
},  
]
```

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

```
"Version": "2012-10-17",  
"Statement": [  
  {  
    "Effect": "Deny",  
    "Action": "*",  
    "Resource": "*"   
  },  
  {  
    "Effect": "Allow",  
    "NotAction": [  
      "guardduty:DeleteDetector",  
      "guardduty:UpdateDetector",  
      "securityhub:DisableSecurityHub"  
    ],  
    "Resource": [  
      "*"   
    ]  
  }  
]
```

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

```
"Version": "2012-10-17",  
"Statement": [  
  {  
    "Effect": "Allow",  
    "Action": "*",  
    "Resource": "*"   
  },  
  {  
    "Effect": "Deny",  
    "NotAction": [  
      "guardduty:DeleteDetector",  
      "guardduty:UpdateDetector",  
      "securityhub:DisableSecurityHub"  
    ],  
    "Resource": [  
      "*"   
    ]  
  }  
]
```

D. A screenshot of a computer code Description automatically generated

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "NotAction": [
        "guardduty:DeleteDetector",
        "guardduty:UpdateDetector",
        "securityhub:DisableSecurityHub"
      ],
      "Resource": [
        "*"
      ]
    }
  ]
}
```

Answer: A

NEW QUESTION 2

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

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

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

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

Answer: ACF

Explanation:

The correct answer is A, C, and F.

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

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

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

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

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

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

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

References:

- > AWS Step Functions
- > AWS Batch
- > Amazon EventBridge
- > Amazon CloudWatch

- Amazon SQS
- Amazon SNS

NEW QUESTION 3

A company has retail stores. The company is designing a solution to store scanned copies of customer receipts on Amazon S3. Files will be between 100 KB and 5 MB in PDF format. Each retail store must have a unique encryption key. Each object must be encrypted with a unique key. Which solution will meet these requirements?

- A. Create a dedicated AWS Key Management Service (AWS KMS) customer managed key for each retail store. Use the S3 Put operation to upload the objects to Amazon S3. Specify server-side encryption with AWS KMS keys (SSE-KMS) and the key ID of the store's key.
- B. Create a new AWS Key Management Service (AWS KMS) customer managed key every day for each retail store. Use the KMS Encrypt operation to encrypt objects. Then upload the objects to Amazon S3.
- C. Run the AWS Key Management Service (AWS KMS) GenerateDataKey operation every day for each retail store. Use the data key and client-side encryption to encrypt the objects. Then upload the objects to Amazon S3.
- D. Use the AWS Key Management Service (AWS KMS) ImportKeyMaterial operation to import new key material to AWS KMS every day for each retail store. Use a customer managed key and the KMS Encrypt operation to encrypt the objects. Then upload the objects to Amazon S3.

Answer: A

Explanation:

To meet the requirements of storing scanned copies of customer receipts on Amazon S3, where files will be between 100 KB and 5 MB in PDF format, each retail store must have a unique encryption key, and each object must be encrypted with a unique key, the most appropriate solution would be to create a dedicated AWS Key Management Service (AWS KMS) customer managed key for each retail store. Then, use the S3 Put operation to upload the objects to Amazon S3, specifying server-side encryption with AWS KMS keys (SSE-KMS) and the key ID of the store's key.

References: : Amazon S3 - Amazon Web Services : AWS Key Management Service - Amazon Web Services : Amazon S3 - Amazon Web Services : AWS Key Management Service - Amazon Web Service

NEW QUESTION 4

A company wants to migrate its static primary domain website to AWS. The company hosts the website and DNS servers internally. The company wants the website to enforce SSL/TLS encryption, block IP addresses from outside the United States (US), and take advantage of managed services whenever possible. Which solution will meet these requirements?

- A. Migrate the website to Amazon S3. Import a public SSL certificate to an Application Load Balancer.
- B. Balancer with rules to block traffic from outside the US. Migrate DNS to Amazon Route 53.
- C. Migrate the website to Amazon EC2. Import a public SSL certificate that is created by AWS Certificate Manager (ACM) to an Application Load Balancer with rules to block traffic from outside the US. Update DNS accordingly.
- D. Migrate the website to Amazon S3. Import a public SSL certificate to Amazon CloudFront. Use AWS WAF rules to block traffic from outside the US. Update DNS accordingly.
- E. Migrate the website to Amazon S3. Import a public SSL certificate that is created by AWS Certificate Manager (ACM) to Amazon CloudFront.
- F. CloudFront. Configure CloudFront to block traffic from outside the US.
- G. Migrate DNS to Amazon Route 53.

Answer: D

Explanation:

To migrate the static website to AWS and meet the requirements, the following steps are required:

- Migrate the website to Amazon S3, which is a highly scalable and durable object storage service that can host static websites. To do this, create an S3 bucket with the same name as the domain name of the website, enable static website hosting for the bucket, upload the website files to the bucket, and configure the bucket policy to allow public read access to the objects. For more information, see [Hosting a static website on Amazon S3](#).
- Import a public SSL certificate that is created by AWS Certificate Manager (ACM) to Amazon CloudFront, which is a global content delivery network (CDN) service that can improve the performance and security of web applications. To do this, request or import a public SSL certificate for the domain name of the website using ACM, create a CloudFront distribution with the S3 bucket as the origin, and associate the SSL certificate with the distribution. For more information, see [Using alternate domain names and HTTPS](#).
- Configure CloudFront to block traffic from outside the US, which is one of the requirements. To do this, create a CloudFront web ACL using AWS WAF, which is a web application firewall service that lets you control access to your web applications. In the web ACL, create a rule that uses a geo match condition to block requests that originate from countries other than the US. Associate the web ACL with the CloudFront distribution. For more information, see [How AWS WAF works with Amazon CloudFront features](#).
- Migrate DNS to Amazon Route 53, which is a highly available and scalable cloud DNS service that can route traffic to various AWS services. To do this, register or transfer your domain name to Route 53, create a hosted zone for your domain name, and create an alias record that points your domain name to your CloudFront distribution. For more information, see [Routing traffic to an Amazon CloudFront web distribution by using your domain name](#).

The other options are incorrect because they either do not implement SSL/TLS encryption for the website (A), do not use managed services whenever possible (B), or do not block IP addresses from outside the US (C). Verified References:

- <https://docs.aws.amazon.com/AmazonS3/latest/userguide/HostingWebsiteOnS3Setup.html>
- <https://docs.aws.amazon.com/waf/latest/developerguide/waf-cloudfront.html>
- <https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/routing-to-cloudfront-distribution.html>

NEW QUESTION 5

A company is using AWS Organizations to create OUs for its accounts. The company has more than 20 accounts that are all part of the OUs. A security engineer must implement a solution to ensure that no account can stop file delivery to AWS CloudTrail. Which solution will meet this requirement?

- A. Use the `--is-multi-region-trail` option while running the `create-trail` command to ensure that logs are configured across all AWS Regions.
- B. Create an SCP that includes a Deny rule for the `cloudtrail` action.
- C. StopLogging action. Apply the SCP to all accounts in the OUs.
- D. Create an SCP that includes an Allow rule for the `cloudtrail` action.
- E. StopLogging action. Apply the SCP to all accounts in the OUs.
- F. Use AWS Systems Manager to ensure that CloudTrail is always turned on.

Answer: B

Explanation:

This SCP prevents users or roles in any affected account from disabling a CloudTrail log, either directly as a command or through the console.
https://asecure.cloud/a/scp_cloudtrail/

NEW QUESTION 6

A company wants to monitor the deletion of customer managed CMKs. A security engineer must create an alarm that will notify the company before a CMK is deleted. The security engineer has configured the integration of IAM CloudTrail with Amazon CloudWatch. What should the security engineer do next to meet this requirement?

- A. Use inbound rule 100 to allow traffic on TCP port 443. Use inbound rule 200 to deny traffic on TCP port 3306. Use outbound rule 100 to allow traffic on TCP port 443.
- B. Use inbound rule 100 to deny traffic on TCP port 3306. Use inbound rule 200 to allow traffic on TCP port range 1024-65535. Use outbound rule 100 to allow traffic on TCP port 443.
- C. Use inbound rule 100 to allow traffic on TCP port range 1024-65535. Use inbound rule 200 to deny traffic on TCP port 3306. Use outbound rule 100 to allow traffic on TCP port 443.
- D. Use inbound rule 100 to deny traffic on TCP port 3306. Use inbound rule 200 to allow traffic on TCP port 443. Use outbound rule 100 to allow traffic on TCP port 443.

Answer: A

NEW QUESTION 7

A company is hosting a static website on Amazon S3. The company has configured an Amazon CloudFront distribution to serve the website contents. The company has associated an IAM WAF web ACL with the CloudFront distribution. The web ACL ensures that requests originate from the United States to address compliance restrictions.

THE company is worried that the S3 URL might still be accessible directly and that requests can bypass the CloudFront distribution. Which combination of steps should the company take to remove direct access to the S3 URL? (Select TWO.)

- A. Select "Restrict Bucket Access" in the origin settings of the CloudFront distribution.
- B. Create an origin access identity (OAI) for the S3 origin.
- C. Update the S3 bucket policy to allow s3:GetObject with a condition that the IAM:Referer key matches the secret value. Deny all other requests.
- D. Configure the S3 bucket policy so that only the origin access identity (OAI) has read permission for objects in the bucket.
- E. Add an origin custom header that has the name Referer to the CloudFront distribution. Give the header a secret value.

Answer: AD

NEW QUESTION 8

An application team wants to use IAM Certificate Manager (ACM) to request public certificates to ensure that data is secured in transit. The domains that are being used are not currently hosted on Amazon Route 53.

The application team wants to use an IAM managed distribution and caching solution to optimize requests to its systems and provide better points of presence to customers. The distribution solution will use a primary domain name that is customized. The distribution solution also will use several alternative domain names. The certificates must renew automatically over an indefinite period of time.

Which combination of steps should the application team take to deploy this architecture? (Select THREE.)

- A. Request a certificate from ACM in the us-west-2 Region. Add the domain names that the certificate will secure.
- B. Send an email message to the domain administrators to request vacation of the domains for ACM.
- C. Request validation of the domains for ACM through DNS. Insert CNAME records into each domain's DNS zone.
- D. Create an Application Load Balancer for the caching solution. Select the newly requested certificate from ACM to be used for secure connections.
- E. Create an Amazon CloudFront distribution for the caching solution. Enter the main CNAME record as the Origin Name. Enter the subdomain names or alternate names in the Alternate Domain Names Distribution Settings. Select the newly requested certificate from ACM to be used for secure connections.
- F. Request a certificate from ACM in the us-east-1 Region. Add the domain names that the certificate will secure.

Answer: CDE

NEW QUESTION 9

A company's engineering team is developing a new application that creates IAM Key Management Service (IAM KMS) CMK grants for users immediately after a grant is created. Users must be able to use the CMK to encrypt a 512-byte payload. During load testing, a bug appears intermittently where AccessDeniedExceptions are occasionally triggered when a user first attempts to encrypt using the CMK.

Which solution should the company's security specialist recommend?

- A. Instruct users to implement a retry mechanism every 2 minutes until the call succeeds.
- B. Instruct the engineering team to consume a random grant token from users, and to call the CreateGrant operation, passing it the grant token.
- C. Instruct users to use that grant token in their call to encrypt.
- D. Instruct the engineering team to create a random name for the grant when calling the CreateGrant operation.
- E. Return the name to the users and instruct them to provide the name as the grant token in the call to encrypt.
- F. Instruct the engineering team to pass the grant token returned in the CreateGrant response to users. Instruct users to use that grant token in their call to encrypt.

Answer: D

Explanation:

To avoid AccessDeniedExceptions when users first attempt to encrypt using the CMK, the security specialist should recommend the following solution:

- Instruct the engineering team to pass the grant token returned in the CreateGrant response to users. This allows the engineering team to use the grant token as a form of temporary authorization for the grant.
- Instruct users to use that grant token in their call to encrypt. This allows the users to use the grant token as a proof that they have permission to use the CMK, and to avoid any eventual consistency issues with the grant creation.

NEW QUESTION 10

A company is expanding its group of stores. On the day that each new store opens, the company wants to launch a customized web application for that store. Each store's application will have a non-production environment and a production environment. Each environment will be deployed in a separate AWS account. The company uses AWS Organizations and has an OU that is used only for these accounts. The company distributes most of the development work to third-party development teams. A security engineer needs to ensure that each team follows the company's deployment plan for AWS resources. The security engineer also must limit access to the deployment plan to only the developers who need access. The security engineer already has created an AWS CloudFormation template that implements the deployment plan. What should the security engineer do next to meet the requirements in the MOST secure way?

- A. Create an AWS Service Catalog portfolio in the organization's management account
- B. Upload the CloudFormation template
- C. Add the template to the portfolio's product list
- D. Share the portfolio with the OU.
- E. Use the CloudFormation CLI to create a module from the CloudFormation template
- F. Register the module as a private extension in the CloudFormation registry
- G. Publish the extension
- H. In the OU, create an SCP that allows access to the extension.
- I. Create an AWS Service Catalog portfolio in the organization's management account
- J. Upload the CloudFormation template
- K. Add the template to the portfolio's product list
- L. Create an IAM role that has a trust policy that allows cross-account access to the portfolio for users in the OU account
- M. Attach the AWSServiceCatalogEndUserFullAccess managed policy to the role.
- N. Use the CloudFormation CLI to create a module from the CloudFormation template
- O. Register the module as a private extension in the CloudFormation registry
- P. Publish the extension
- Q. Share the extension with the OU

Answer: A

Explanation:

The correct answer is A. Create an AWS Service Catalog portfolio in the organization's management account. Upload the CloudFormation template. Add the template to the portfolio's product list. Share the portfolio with the OU.

According to the AWS documentation, AWS Service Catalog is a service that allows you to create and manage catalogs of IT services that are approved for use on AWS. You can use Service Catalog to centrally manage commonly deployed IT services and help achieve consistent governance and compliance requirements, while enabling users to quickly deploy only the approved IT services they need.

To use Service Catalog with multiple AWS accounts, you need to enable AWS Organizations with all features enabled. This allows you to centrally manage your accounts and apply policies across your organization. You can also use Service Catalog as a service principal for AWS Organizations, which lets you share your portfolios with organizational units (OUs) or accounts in your organization.

To create a Service Catalog portfolio, you need to use an administrator account, such as the organization's management account. You can upload your CloudFormation template as a product in your portfolio, and define constraints and tags for it. You can then share your portfolio with the OU that contains the accounts for the web applications. This will allow the developers in those accounts to launch products from the shared portfolio using the Service Catalog end user console.

Option B is incorrect because CloudFormation modules are reusable components that encapsulate one or more resources and their configurations. They are not meant to be used as templates for deploying entire stacks of resources. Moreover, sharing a module with an OU does not grant access to launch stacks from it.

Option C is incorrect because creating an IAM role that has a trust policy that allows cross-account access to the portfolio is not secure. It would allow any user in the OU accounts to assume the role and access the portfolio, regardless of their job function or access requirements.

Option D is incorrect because sharing a module with an OU does not grant access to launch stacks from it. It also does not limit access to the deployment plan to only the developers who need access.

NEW QUESTION 10

A company has a batch-processing system that uses Amazon S3, Amazon EC2, and AWS Key Management Service (AWS KMS). The system uses two AWS accounts: Account A and Account B.

Account A hosts an S3 bucket that stores the objects that will be processed. The S3 bucket also stores the results of the processing. All the S3 bucket objects are encrypted by a KMS key that is managed in Account A.

Account B hosts a VPC that has a fleet of EC2 instances that access the S3 bucket in Account A by using statements in the bucket policy. The VPC was created with DNS hostnames enabled and DNS resolution enabled.

A security engineer needs to update the design of the system without changing any of the system's code. No AWS API calls from the batch-processing EC2 instances can travel over the internet.

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

- A. In the Account B VPC, create a gateway VPC endpoint for Amazon S3. For the gateway VPC endpoint, create a resource policy that allows the s3:GetObject, s3:ListBucket, s3:PutObject, and s3:PutObjectAcl actions for the S3 bucket.
- B. In the Account B VPC, create an interface VPC endpoint for Amazon S3. For the interface VPC endpoint, create a resource policy that allows the s3:GetObject, s3:ListBucket, s3:PutObject, and s3:PutObjectAcl actions for the S3 bucket.
- C. In the Account B VPC, create an interface VPC endpoint for AWS KMS
- D. For the interface VPC endpoint, create a resource policy that allows the kms:Encrypt, kms:Decrypt, and kms:GenerateDataKey actions for the KMS key
- E. Ensure that private DNS is turned on for the endpoint.
- F. In the Account B VPC, create an interface VPC endpoint for AWS KMS
- G. For the interface VPC endpoint, create a resource policy that allows the kms:Encrypt, kms:Decrypt, and kms:GenerateDataKey actions for the KMS key
- H. Ensure that private DNS is turned off for the endpoint.
- I. In the Account B VPC, verify that the S3 bucket policy allows the s3:PutObjectAcl action for cross-account use
- J. In the Account B VPC, create a gateway VPC endpoint for Amazon S3. For the gateway VPC endpoint, create a resource policy that allows the s3:GetObject, s3:ListBucket, and s3:PutObject actions for the S3 bucket.

Answer: BC

NEW QUESTION 12

A company has an AWS Lambda function that creates image thumbnails from larger images. The Lambda function needs read and write access to an Amazon S3 bucket in the same AWS account.

Which solutions will provide the Lambda function this access? (Select TWO.)

- A. Create an IAM user that has only programmatic access
- B. Create a new access key pair
- C. Add environmental variables to the Lambda function with the access key ID and secret access key
- D. Modify the Lambda function to use the environmental variables at run time during communication with Amazon S3.
- E. Generate an Amazon EC2 key pair
- F. Store the private key in AWS Secrets Manager
- G. Modify the Lambda function to retrieve the private key from Secrets Manager and to use the private key during communication with Amazon S3.
- H. Create an IAM role for the Lambda function
- I. Attach an IAM policy that allows access to the S3 bucket.
- J. Create an IAM role for the Lambda function
- K. Attach a bucket policy to the S3 bucket to allow access. Specify the function's IAM role as the principal.
- L. Create a security group
- M. Attach the security group to the Lambda function
- N. Attach a bucket policy that allows access to the S3 bucket through the security group ID.

Answer: CD

NEW QUESTION 14

A company uses Amazon RDS for MySQL as a database engine for its applications. A recent security audit revealed an RDS instance that is not compliant with company policy for encrypting data at rest. A security engineer at the company needs to ensure that all existing RDS databases are encrypted using server-side encryption and that any future deviations from the policy are detected.

Which combination of steps should the security engineer take to accomplish this? (Select TWO.)

- A. Create an IAM Config rule to detect the creation of unencrypted RDS database
- B. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to trigger on the IAM Config rules compliance state change and use Amazon Simple Notification Service (Amazon SNS) to notify the security operations team.
- C. Use IAM System Manager State Manager to detect RDS database encryption configuration drift
- D. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to track state changes and use Amazon Simple Notification Service (Amazon SNS) to notify the security operations team.
- E. Create a read replica for the existing unencrypted RDS database and enable replica encryption in the process
- F. Once the replica becomes active, promote it into a standalone database instance and terminate the unencrypted database instance.
- G. Take a snapshot of the unencrypted RDS database
- H. Copy the snapshot and enable snapshot encryption in the process
- I. Restore the database instance from the newly created encrypted snapshot
- J. Terminate the unencrypted database instance.
- K. Enable encryption for the identified unencrypted RDS instance by changing the configurations of the existing database

Answer: AD

NEW QUESTION 15

An ecommerce website was down for 1 hour following a DDoS attack. Users were unable to connect to the website during the attack period. The ecommerce company's security team is worried about future potential attacks and wants to prepare for such events. The company needs to minimize downtime in its response to similar attacks in the future.

Which steps would help achieve this? (Select TWO.)

- A. Enable Amazon GuardDuty to automatically monitor for malicious activity and block unauthorized access.
- B. Subscribe to IAM Shield Advanced and reach out to IAM Support in the event of an attack.
- C. Use VPC Flow Logs to monitor network traffic and an IAM Lambda function to automatically block an attacker's IP using security groups.
- D. Set up an Amazon CloudWatch Events rule to monitor the IAM CloudTrail events in real time, use IAM Config rules to audit the configuration, and use IAM Systems Manager for remediation.
- E. Use IAM WAF to create rules to respond to such attacks

Answer: BE

Explanation:

To minimize downtime in response to DDoS attacks, the company should do the following:

- Subscribe to AWS Shield Advanced and reach out to AWS Support in the event of an attack. This provides access to 24x7 support from the AWS DDoS Response Team (DRT), as well as advanced detection and mitigation capabilities for network and application layer attacks.
- Use AWS WAF to create rules to respond to such attacks. This allows the company to filter web requests based on IP addresses, headers, body, or URI strings, and block malicious requests before they reach the web applications.

NEW QUESTION 18

A company has two AWS accounts. One account is for development workloads. The other account is for production workloads. For compliance reasons, the production account contains all the AWS Key Management Service (AWS KMS) keys that the company uses for encryption.

The company applies an IAM role to an AWS Lambda function in the development account to allow secure access to AWS resources. The Lambda function must access a specific KMS customer managed key that exists in the production account to encrypt the Lambda function's data.

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

- A. Configure the key policy for the customer managed key in the production account to allow access to the Lambda service.
- B. Configure the key policy for the customer managed key in the production account to allow access to the IAM role of the Lambda function in the development account.
- C. Configure a new IAM policy in the production account with permissions to use the customer managed key
- D. Apply the IAM policy to the IAM role that the Lambda function in the development account uses.
- E. Configure a new key policy in the development account with permissions to use the customer managed key
- F. Apply the key policy to the IAM role that the Lambda function in the development account uses.
- G. Configure the IAM role for the Lambda function in the development account by attaching an IAM policy that allows access to the customer managed key in the production account.

Answer: BE

Explanation:

To allow a Lambda function in one AWS account to access a KMS customer managed key in another AWS account, the following steps are required:

- Configure the key policy for the customer managed key in the production account to allow access to the IAM role of the Lambda function in the development account. A key policy is a resource-based policy that defines who can use or manage a KMS key. To grant cross-account access to a KMS key, you must specify the AWS account ID and the IAM role ARN of the external principal in the key policy statement. For more information, see [Allowing users in other accounts to use a KMS key](#).
- Configure the IAM role for the Lambda function in the development account by attaching an IAM policy that allows access to the customer managed key in the production account. An IAM policy is an identity-based policy that defines what actions an IAM entity can perform on which resources. To allow an IAM role to use a KMS key in another account, you must specify the KMS key ARN and the kms:Encrypt action (or any other action that requires access to the KMS key) in the IAM policy statement. For more information, see [Using IAM policies with AWS KMS](#).

This solution will meet the requirements of allowing secure access to a KMS customer managed key across AWS accounts.

The other options are incorrect because they either do not grant cross-account access to the KMS key (A, C), or do not use a valid policy type for KMS keys (D).

Verified References:

- <https://docs.aws.amazon.com/kms/latest/developerguide/iam-policies.html>

NEW QUESTION 19

Your company has a set of EC2 Instances defined in IAM. These Ec2 Instances have strict security groups attached to them. You need to ensure that changes to the Security groups are noted and acted on accordingly. How can you achieve this?

Please select:

- A. Use Cloudwatch logs to monitor the activity on the Security Group
- B. Use filters to search for the changes and use SNS for the notification.
- C. Use Cloudwatch metrics to monitor the activity on the Security Group
- D. Use filters to search for the changes and use SNS for the notification.
- E. Use IAM inspector to monitor the activity on the Security Group
- F. Use filters to search for the changes and use SNS f the notification.
- G. Use Cloudwatch events to be triggered for any changes to the Security Group
- H. Configure the Lambda function for email notification as well.

Answer: D

Explanation:

The below diagram from an IAM blog shows how security groups can be monitored

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



Option A is invalid because you need to use Cloudwatch Events to check for chan, Option B is invalid because you need to use Cloudwatch Events to check for chang

Option C is invalid because IAM inspector is not used to monitor the activity on Security Groups For more information on monitoring security groups, please visit the below URL:

<https://IAM.amazon.com/blogs/security/how-to-automatically-revert-and-receive-notifications-about-changes-t 'pc-security-groups/>

The correct answer is: Use Cloudwatch events to be triggered for any changes to the Security Groups. Configure the Lambda function for email notification as well.

Submit your Feedback/Queries to our Experts

NEW QUESTION 24

A security engineer configures Amazon S3 Cross-Region Replication (CRR) for all objects that are in an S3 bucket in the us-east-1. Region Some objects in this S3 bucket use server-side encryption with AWS KMS keys (SSE-KMS) for encryption at test. The security engineer creates a destination S3 bucket in the us-west-2 Region. The destination S3 bucket is in the same AWS account as the source S3 bucket.

The security engineer also creates a customer managed key in us-west-2 to encrypt objects at rest in the destination S3 bucket. The replication configuration is set to use the key in us-west-2 to encrypt objects in the destination S3 bucket. The security engineer has provided the S3 replication configuration with an IAM role to perform the replication in Amazon S3.

After a day, the security engineer notices that no encrypted objects from the source S3 bucket are replicated to the destination S3 bucket. However, all the unencrypted objects are replicated.

Which combination of steps should the security engineer take to remediate this issue? (Select THREE.)

- A. Change the replication configuration to use the key in us-east-1 to encrypt the objects that are in the destination S3 bucket.
- B. Grant the IAM role the km

- C. Encrypt permission for the key in us-east-1 that encrypts source objects.
- D. Grant the IAM role the s3 GetObjectVersionForReplication permission for objects that are in the source S3 bucket.
- E. Grant the IAM role the kms.Decrypt permission for the key in us-east-1 that encrypts source objects.
- F. Decrypt permission for the key in us-east-1 that encrypts source objects.
- G. Change the key policy of the key in us-east-1 to grant the kms.Decrypt permission for the key in us-east-1 that encrypts source objects.
- H. Decrypt permission to the security engineer's IAM account.
- I. Grant the IAM role the kms.Encrypt permission for the key in us-west-2 that encrypts objects that are in the destination S3 bucket.

Answer: BF

Explanation:

To enable S3 Cross-Region Replication (CRR) for objects that are encrypted with SSE-KMS, the following steps are required:

- Grant the IAM role the kms.Decrypt permission for the key in us-east-1 that encrypts source objects.

This will allow the IAM role to decrypt the source objects before replicating them to the destination bucket. The kms.Decrypt permission must be granted in the key policy of the source KMS key or in an IAM policy attached to the IAM role.

- Grant the IAM role the kms.Encrypt permission for the key in us-west-2 that encrypts objects that are in the destination S3 bucket. This will allow the IAM role to encrypt the replica objects with the destination KMS key before storing them in the destination bucket. The kms.Encrypt permission must be granted in the key policy of the destination KMS key or in an IAM policy attached to the IAM role.

This solution will remediate the issue of encrypted objects not being replicated to the destination bucket.

The other options are incorrect because they either do not grant the necessary permissions for CRR (A, C, D), or do not use a valid encryption method for CRR (E).

Verified References:

- <https://docs.aws.amazon.com/AmazonS3/latest/userguide/replication-config-for-kms-objects.html>

NEW QUESTION 27

While securing the connection between a company's VPC and its on-premises data center, a Security Engineer sent a ping command from an on-premises host (IP address 203.0.113.12) to an Amazon EC2 instance (IP address 172.31.16.139).

The ping command did not return a response. The flow log in the VPC showed the following:

```
2 123456789010 eni-1235b8ca 203.0.113.12 172.31.16.139 0 0 1 4 336 1432917027 1432917142 ACCEPT OK
```

```
2 123456789010 eni-1235b8ca 172.31.16.139 203.0.113.12 0 0 1 4 336 1432917094 1432917142 REJECT OK
```

What action should be performed to allow the ping to work?

- A. In the security group of the EC2 instance, allow inbound ICMP traffic.
- B. In the security group of the EC2 instance, allow outbound ICMP traffic.
- C. In the VPC's NACL, allow inbound ICMP traffic.
- D. In the VPC's NACL, allow outbound ICMP traffic.

Answer: D

NEW QUESTION 28

There are currently multiple applications hosted in a VPC. During monitoring it has been noticed that multiple port scans are coming in from a specific IP Address block. The internal security team has requested that all offending IP Addresses be denied for the next 24 hours. Which of the following is the best method to quickly and temporarily deny access from the specified IP Address's.

Please select:

- A. Create an AD policy to modify the Windows Firewall settings on all hosts in the VPC to deny access from the IP Address block.
- B. Modify the Network ACLs associated with all public subnets in the VPC to deny access from the IP Address block.
- C. Add a rule to all of the VPC Security Groups to deny access from the IP Address block.
- D. Modify the Windows Firewall settings on all AMI'S that your organization uses in that VPC to deny access from the IP address block.

Answer: B

Explanation:

NACL acts as a firewall at the subnet level of the VPC and we can deny the offending IP address block at the subnet level using NACL rules to block the incoming traffic to the VPC instances. Since NACL rules are applied as per the Rule numbers make sure that this rule number should take precedence over other rule numbers if there are any such rules that will allow traffic from these IP ranges. The lowest rule number has more precedence over a rule that has a higher number. The IAM Documentation mentions the following as a best practices for IAM users

For extra security, enable multi-factor authentication (MFA) for privileged IAM users (users who are allowed access to sensitive resources or APIs). With MFA, users have a device that generates a unique authentication code (a one-time password, or OTP). Users must provide both their normal credentials (like their user name and password) and the OTP. The MFA device can either be a special piece of hardware, or it can be a virtual device (for example, it can run in an app on a smartphone).

Options C is invalid because these options are not available Option D is invalid because there is not root access for users

For more information on IAM best practices, please visit the below URL: <https://docs.IAM.amazon.com/IAM/latest/UserGuide/best-practices.html>

The correct answer is: Modify the Network ACLs associated with all public subnets in the VPC to deny access from the IP Address block.

omit your Feedback/Queries to our Experts

NEW QUESTION 33

A company has an application that uses an Amazon RDS PostgreSQL database. The company is developing an application feature that will store sensitive information for an individual in the database.

During a security review of the environment, the company discovers that the RDS DB instance is not encrypting data at rest. The company needs a solution that will provide encryption at rest for all the existing data and for any new data that is entered for an individual.

Which combination of options can the company use to meet these requirements? (Select TWO.)

- A. Create a snapshot of the DB instance
- B. Copy the snapshot to a new snapshot, and enable encryption for the copy process
- C. Use the new snapshot to restore the DB instance.
- D. Modify the configuration of the DB instance by enabling encryption
- E. Create a snapshot of the DB instance
- F. Use the snapshot to restore the DB instance.

- G. Use IAM Key Management Service (IAM KMS) to create a new default IAM managed AWS KMS key. Select this key as the encryption key for operations with Amazon RDS.
- H. Use IAM Key Management Service (IAM KMS) to create a new CMK.
- I. Select this key as the encryption key for operations with Amazon RDS.
- J. Create a snapshot of the DB instance.
- K. Enable encryption on the snapshot. Use the snapshot to restore the DB instance.

Answer: CE

NEW QUESTION 38

A company has a new partnership with a vendor. The vendor will process data from the company's customers. The company will upload data files as objects into an Amazon S3 bucket. The vendor will download the objects to perform data processing. The objects will contain sensitive data. A security engineer must implement a solution that prevents objects from residing in the S3 bucket for longer than 72 hours. Which solution will meet these requirements?

- A. Use Amazon Macie to scan the S3 bucket for sensitive data every 72 hours.
- B. Configure Macie to delete the objects that contain sensitive data when they are discovered.
- C. Configure an S3 Lifecycle rule on the S3 bucket to expire objects that have been in the S3 bucket for 72 hours.
- D. Create an Amazon EventBridge scheduled rule that invokes an AWS Lambda function every day. Program the Lambda function to remove any objects that have been in the S3 bucket for 72 hours.
- E. Use the S3 Intelligent-Tiering storage class for all objects that are uploaded to the S3 bucket.
- F. Use S3 Intelligent-Tiering to expire objects that have been in the S3 bucket for 72 hours.

Answer: B

NEW QUESTION 43

A company is building a data processing application that uses AWS Lambda functions. The application's Lambda functions need to communicate with an Amazon RDS DB instance that is deployed within a VPC in the same AWS account. Which solution meets these requirements in the MOST secure way?

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

Answer: C

Explanation:

This solution ensures that the Lambda functions are deployed inside the VPC and can communicate with the Amazon RDS DB instance securely. The security group attached to the Lambda functions only allows outbound traffic to the VPC CIDR range, and the DB instance security group only allows traffic from the Lambda security group. This solution ensures that the Lambda functions can communicate with the DB instance securely and that the DB instance is not exposed to the public internet.

NEW QUESTION 48

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 49

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 51

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 56

A Security Architect has been asked to review an existing security architecture and identify why the application servers cannot successfully initiate a connection to the database servers. The following summary describes the architecture:

- * 1 An Application Load Balancer, an internet gateway, and a NAT gateway are configured in the public subnet
 - * 2. Database, application, and web servers are configured on three different private subnets.
 - * 3 The VPC has two route tables: one for the public subnet and one for all other subnets The route table for the public subnet has a 0 0 0 0/0 route to the internet gateway The route table for all other subnets has a 0 0.0.0/0 route to the NAT gateway. All private subnets can route to each other
 - * 4 Each subnet has a network ACL implemented that limits all inbound and outbound connectivity to only the required ports and protocols
 - * 5 There are 3 Security Groups (SGs) database application and web Each group limits all inbound and outbound connectivity to the minimum required
- Which of the following accurately reflects the access control mechanisms the Architect should verify?

- A. Outbound SG configuration on database servers Inbound SG configuration on application servers inbound and outbound network ACL configuration on the database subnet Inbound and outbound network ACL configuration on the application server subnet
- B. Inbound SG configuration on database servers Outbound SG configuration on application servers Inbound and outbound network ACL configuration on the database subnet Inbound and outbound network ACL configuration on the application server subnet
- C. Inbound and outbound SG configuration on database servers Inbound and outbound SG configuration on application servers Inbound network ACL configuration on the database subnet Outbound network ACL configuration on the application server subnet
- D. Inbound SG configuration on database servers Outbound SG configuration on application servers Inbound network ACL configuration on the database subnet Outbound network ACL configuration on the application server subnet.

Answer: A

Explanation:

this is the accurate reflection of the access control mechanisms that the Architect should verify. Access control mechanisms are methods that regulate who can access what resources and how. Security groups and network ACLs are two types of access control mechanisms that can be applied to EC2 instances and subnets. Security groups are stateful, meaning they remember and return traffic that was previously allowed. Network ACLs are stateless, meaning they do not remember or return traffic that was previously allowed. Security groups and network ACLs can have inbound and outbound rules that specify the source, destination, protocol, and port of the traffic. By verifying the outbound security group configuration on database servers, the inbound security group configuration on application servers, and the inbound and outbound network ACL configuration on both the database and application server subnets, the Architect can check if there are any misconfigurations or conflicts that prevent the application servers from initiating a connection to the database servers. The other options are either inaccurate or incomplete for verifying the access control mechanisms.

NEW QUESTION 57

A company is implementing new compliance requirements to meet customer needs. According to the new requirements the company must not use any Amazon RDS DB instances or DB clusters that lack encryption of the underlying storage. The company needs a solution that will generate an email alert when an unencrypted DB instance or DB cluster is created. The solution also must terminate the unencrypted DB instance or DB cluster.

Which solution will meet these requirements in the MOST operationally efficient manner?

- A. Create an AWS Config managed rule to detect unencrypted ROS storag
- B. Configure an automatic remediation action to publish messages to an Amazon Simple Notification Service (Amazon SNS) topic that includes an AWS Lambda function and an email delivery target as subscriber
- C. Configure the Lambda function to delete the unencrypted resource.
- D. Create an AWS Config managed rule to detect unencrypted RDS storag
- E. Configure a manual remediation action to invoke an AWS Lambda functio
- F. Configure the Lambda function to publish messages to an Amazon Simple Notification Service (Amazon SNS) topic and to delete the unencrypted resource.
- G. Create an Amazon EventBridge rule that evaluates RDS event patterns and is initiated by the creation of DB instances or DB clusters Configure the rule to publish messages to an Amazon Simple Notification Service (Amazon SNS) topic that includes an AWS Lambda function and an email delivery target as subscriber
- H. Configure the Lambda function to delete the unencrypted resource.
- I. Create an Amazon EventBridge rule that evaluates RDS event patterns and is initiated by the creation of DB instances or DB cluster
- J. Configure the rule to invoke an AWS Lambda functio
- K. Configure the Lambda function to publish messages to an Amazon Simple Notification Service (Amazon SNS) topic and to delete the unencrypted resource.

Answer: A

Explanation:

<https://docs.aws.amazon.com/config/latest/developerguide/rds-storage-encrypted.html>

NEW QUESTION 60

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 63

A company is running workloads in a single IAM account on Amazon EC2 instances and Amazon EMR clusters a recent security audit revealed that multiple Amazon Elastic Block Store (Amazon EBS) volumes and snapshots are not encrypted. The company's security engineer is working on a solution that will allow users to deploy EC2 Instances and EMR clusters while ensuring that all new EBS volumes and EBS snapshots are encrypted at rest. The solution must also minimize operational overhead. Which steps should the security engineer take to meet these requirements?

- A. Create an Amazon Event Bridge (Amazon Cloud watch Events) event with an EC2 instance as the source and create volume as the event trigger
- B. When the event is triggered invoke an IAM Lambda function to evaluate and notify the security engineer if the EBS volume that was created is not encrypted.
- C. Use a customer managed IAM policy that will verify that the encryption ag of the Createvolume context is set to true
- D. Apply this rule to all users.
- E. Create an IAM Config rule to evaluate the configuration of each EC2 instance on creation or modification. Have the IAM Config rule trigger an IAM Lambda function to alert the security team and terminate the instance if the EBS volume is not encrypted
- F. 5
- G. Use the IAM Management Console or IAM CLI to enable encryption by default for EBS volumes in each IAM Region where the company operates.

Answer: D

Explanation:

To ensure that all new EBS volumes and EBS snapshots are encrypted at rest and minimize operational overhead, the security engineer should do the following:

- Use the AWS Management Console or AWS CLI to enable encryption by default for EBS volumes in each AWS Region where the company operates. This allows the security engineer to automatically encrypt any new EBS volumes and snapshots created from those volumes, without requiring any additional actions from users.

NEW QUESTION 68

A company's Chief Security Officer has requested that a Security Analyst review and improve the security posture of each company IAM account. The Security Analyst decides to do this by improving IAM account root user security. Which actions should the Security Analyst take to meet these requirements? (Select THREE.)

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

Answer: ADE

Explanation:

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

to the account root user can help enforce the principle of least privilege and restrict the account root user from performing unnecessary or dangerous actions. The other options are either invalid or ineffective for improving IAM account root user security.

NEW QUESTION 69

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

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

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

Answer: ADE

Explanation:

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

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

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

NEW QUESTION 72

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

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

Answer: AE

NEW QUESTION 73

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

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

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

Answer: C

Explanation:

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

NEW QUESTION 74

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

What should the security engineer recommend?

- A. Enable Amazon RDS encryption to encrypt the database and snapshot

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

Answer: C

NEW QUESTION 79

A security engineer is using AWS Organizations and wants to optimize SCPs. The security engineer needs to ensure that the SCPs conform to best practices. Which approach should the security engineer take to meet this requirement?

- A. Use AWS IAM Access Analyzer to analyze the policies
- B. View the findings from policy validation checks.
- C. Review AWS Trusted Advisor checks for all accounts in the organization.
- D. Set up AWS Audit Manager
- E. Run an assessment for all AWS Regions for all accounts.
- F. Ensure that Amazon Inspector agents are installed on all Amazon EC2 instances in all accounts.

Answer: A

NEW QUESTION 83

A company used a lift-and-shift approach to migrate from its on-premises data centers to the AWS Cloud. The company migrated on-premises VMS to Amazon EC2 instances. Now the company wants to replace some of the components that are running on the EC2 instances with managed AWS services that provide similar functionality.

Initially, the company will transition from load balancer software that runs on EC2 instances to AWS Elastic Load Balancers. A security engineer must ensure that after this transition, all the load balancer logs are centralized and searchable for auditing. The security engineer must also ensure that metrics are generated to show which ciphers are in use.

Which solution will meet these requirements?

- A. Create an Amazon CloudWatch Logs log group
- B. Configure the load balancers to send logs to the log group
- C. Use the CloudWatch Logs console to search the log
- D. Create CloudWatch Logs filters on the logs for the required metrics.
- E. Create an Amazon S3 bucket
- F. Configure the load balancers to send logs to the S3 bucket
- G. Use Amazon Athena to search the logs that are in the S3 bucket
- H. Create Amazon CloudWatch filters on the S3 log files for the required metrics.
- I. Create an Amazon S3 bucket
- J. Configure the load balancers to send logs to the S3 bucket
- K. Use Amazon Athena to search the logs that are in the S3 bucket
- L. Create Athena queries for the required metric
- M. Publish the metrics to Amazon CloudWatch.
- N. Create an Amazon CloudWatch Logs log group
- O. Configure the load balancers to send logs to the log group
- P. Use the AWS Management Console to search the log
- Q. Create Amazon Athena queries for the required metric
- R. Publish the metrics to Amazon CloudWatch.

Answer: C

Explanation:

- Amazon S3 is a service that provides scalable, durable, and secure object storage. You can use Amazon S3 to store and retrieve any amount of data from anywhere on the web¹
- AWS Elastic Load Balancing is a service that distributes incoming application or network traffic across multiple targets, such as EC2 instances, containers, or IP addresses. You can use Elastic Load Balancing to increase the availability and fault tolerance of your applications²
- Elastic Load Balancing supports access logging, which captures detailed information about requests sent to your load balancer. Each log contains information such as the time the request was received, the client's IP address, latencies, request paths, and server responses. You can use access logs to analyze traffic patterns and troubleshoot issues³
- You can configure your load balancer to store access logs in an Amazon S3 bucket that you specify. You can also specify the interval for publishing the logs, which can be 5 or 60 minutes. The logs are stored in a hierarchical folder structure by load balancer name, IP address, year, month, day, and time.
- Amazon Athena is a service that allows you to analyze data in Amazon S3 using standard SQL. You can use Athena to run ad-hoc queries and get results in seconds. Athena is serverless, so there is no infrastructure to manage and you pay only for the queries that you run.
- You can use Athena to search the access logs that are stored in your S3 bucket. You can create a table in Athena that maps to your S3 bucket and then run SQL queries on the table. You can also use the Athena console or API to view and download the query results.
- You can also use Athena to create queries for the required metrics, such as the number of requests per cipher or protocol. You can then publish the metrics to

Amazon CloudWatch, which is a service that monitors and manages your AWS resources and applications. You can use CloudWatch to collect and track metrics, create alarms, and automate actions based on the state of your resources.

➤ By using this solution, you can meet the requirements of ensuring that all the load balancer logs are centralized and searchable for auditing and that metrics are generated to show which ciphers are in use.

NEW QUESTION 85

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 87

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

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

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

Answer: BDF

Explanation:

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

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

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

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

To use EventBridge with Security Hub findings, you need to enable Security Hub as an event source in EventBridge. This will allow you to publish events from

Security Hub to EventBridge in the same Region. You can then create EventBridge rules that match Security Hub findings based on criteria such as severity, type, or resource. You can also specify targets for your rules, such as Lambda functions, SNS topics, or Kinesis Data Firehose delivery streams.

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

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

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

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

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

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

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

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

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

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

NEW QUESTION 89

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 91

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 96

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

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

Answer: C

Explanation:

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

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

NEW QUESTION 99

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

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

Answer: A

Explanation:

The IAM Documentation mentions the following

To determine whether a log file was modified, deleted, or unchanged after CloudTrail delivered it you can use CloudTrail log file integrity validation. This feature is built using industry standard algorithms: SHA-256 for hashing and SHA-256 with RSA for digital signing. This makes it computationally infeasible to modify, delete or forge CloudTrail log files without detection. You can use the IAM CLI to validate the files in the location where CloudTrail delivered them
Validated log files are invaluable in security and forensic investigations. For example, a validated log file enables you to assert positively that the log file itself has not changed, or that particular user credentials performed specific API activity. The CloudTrail log file integrity validation process also lets you know if a log file has been deleted or changed, or assert positively that no log files were delivered to your account during a given period of time.
Options B.C and D is invalid because you need to check for log File Integrity Validation for cloudtrail logs For more information on Cloudtrail log file validation, please visit the below URL: <http://docs.IAM.amazon.com/IAMcloudtrail/latest/userguide/cloudtrail-log-file-validation-intro.html>
The correct answer is: Use CloudTrail Log File Integrity Validation. omit your Feedback/Queries to our Expert

NEW QUESTION 100

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

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

Answer: D

Explanation:

The correct answer is D.

To design a solution that will proactively monitor for suspicious behavior across all the accounts that contain production workloads, the security engineer needs to use a service that can aggregate and analyze security findings from multiple sources. AWS Security Hub is a service that provides a comprehensive view of your security posture across your AWS accounts and enables you to check your environment against security standards and best practices. Security Hub also integrates with other AWS services, such as Amazon GuardDuty, AWS Config, and AWS Systems Manager, to collect and correlate security findings.
To automate remediation of incidents across the production accounts, the security engineer needs to use a service that can trigger actions based on events. Amazon EventBridge is a serverless event bus service that allows you to connect your applications with data from a variety of sources. EventBridge can use rules to match events and route them to targets for processing. You can use EventBridge to invoke a custom AWS Lambda function from the Security Hub findings.
Lambda is a serverless compute service that lets you run code without provisioning or managing servers.
To publish a notification to an Amazon SNS topic when a critical security finding is detected, the security engineer needs to use a service that can send messages to subscribers. Amazon SNS is a fully managed messaging service that enables you to decouple and scale microservices, distributed systems, and serverless

applications. SNS can deliver messages to a variety of endpoints, such as email, SMS, or HTTP. You can configure the Lambda function to also publish notifications to the SNS topic.

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

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

References:

- AWS Security Hub
- Amazon EventBridge
- AWS Lambda
- Amazon SNS
- Aggregating Security Hub findings across accounts

NEW QUESTION 103

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 106

A security engineer is checking an AWS CloudFormation template for vulnerabilities. The security engineer finds a parameter that has a default value that exposes an application's API key in plaintext. The parameter is referenced several times throughout the template. The security engineer must replace the parameter while maintaining the ability to reference the value in the template. Which solution will meet these requirements in the MOST secure way?

```
{resolve:s3:MyBucketName:MyObjectName}}.
```

- A. Store the API key value as a SecureString parameter in AWS Systems Manager Parameter Store
- B. In the template, replace all references to the value with `{{resolve:ssm:MySSMParameterName:!}}`.
- C. Store the API key value in AWS Secrets Manager
- D. In the template, replace all references to the value with `{ {resolve:secretsmanager:MySecretId:SecretString}}`.
- E. Store the API key value in Amazon DynamoDB
- F. In the template, replace all references to the value with `{{resolve:dynamodb:MyTableName:MyPrimaryKey}}`.
- G. Store the API key value in a new Amazon S3 bucket
- H. In the template, replace all references to the value with `{`

Answer: B

Explanation:

The correct answer is B. Store the API key value in AWS Secrets Manager. In the template, replace all references to the value with `{{resolve:secretsmanager:MySecretId:SecretString}}`.

This answer is correct because AWS Secrets Manager is a service that helps you protect secrets that are needed to access your applications, services, and IT resources. You can store and manage secrets such as database credentials, API keys, and other sensitive data in Secrets Manager. You can also use Secrets Manager to rotate, manage, and retrieve your secrets throughout their lifecycle¹. Secrets Manager integrates with AWS CloudFormation, which allows you to reference secrets from your templates using the `{{resolve:secretsmanager:...}}` syntax². This way, you can avoid exposing your secrets in plaintext and still use them in your resources.

The other options are incorrect because:

- A. Storing the API key value as a SecureString parameter in AWS Systems Manager Parameter Store is not a solution, because AWS CloudFormation does not support references to SecureString parameters. This means that you cannot use the `{{resolve:ssm:...}}` syntax to retrieve encrypted parameter values from Parameter Store³. You would have to use a custom resource or a Lambda function to decrypt the parameter value, which adds complexity and overhead to your template.
- C. Storing the API key value in Amazon DynamoDB is not a solution, because AWS CloudFormation does not support references to DynamoDB items. This means that you cannot use the `{{resolve:dynamodb:...}}` syntax to retrieve item values from DynamoDB tables⁴. You would have to use a custom resource or a Lambda function to query the DynamoDB table, which adds complexity and overhead to your template.
- D. Storing the API key value in a new Amazon S3 bucket is not a solution, because AWS CloudFormation does not support references to S3 objects. This means that you cannot use the `{{resolve:s3:...}}` syntax to retrieve object values from S3 buckets⁵. You would have to use a custom resource or a Lambda function to download the object from S3,

which adds complexity and overhead to your template.

References:

1: What is AWS Secrets Manager? 2: Referencing AWS Secrets Manager secrets from Parameter Store parameters 3: Using dynamic references to specify template values 4: Amazon DynamoDB 5: Amazon Simple Storage Service (S3)

NEW QUESTION 111

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 114

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 118

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 120

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

Which solution will meet these requirements?

- A. Generate an S3 bucket policy.
- B. Specify cloudfront.amazonaws.com as the principal.
- C. Use the aws:SourceIp condition key to allow access only if the request comes from the specified IP addresses.
- D. Create a CloudFront origin access identity (OAI). Create the S3 bucket policy so that only the OAI has access.
- E. Create an AWS WAF web ACL and add an IP set rule.
- F. Associate the web ACL with the CloudFront distribution.

- G. Implement security groups to allow only the specified IP addresses access and to restrict S3 bucket access by using the CloudFront distribution.
- H. Create an S3 bucket access point to allow access from only the CloudFront distributio
- I. Create an AWS WAF web ACL and add an IP set rul
- J. Associate the web ACL with the CloudFront distribution.

Answer: B

NEW QUESTION 125

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 130

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

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

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

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

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

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

Answer: C

Explanation:

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

This answer is correct because AWS RAM is a service that helps you securely share your AWS resources across AWS accounts, within your organization or organizational units (OUs), and with IAM roles and users for supported resource types¹. One of the supported resource types is VPC subnets², which means you can share the subnets in Account-A's VPC with the other member accounts using AWS RAM. This way, you can meet the requirements of using a centrally managed VPC, avoiding duplicate VPCs in each account, and launching workloads in shared subnets. You can also control the access to the shared subnets by using IAM policies and resource-based policies³, which can prevent one account from modifying another account's resources.

The other options are incorrect because:

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

References:

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

NEW QUESTION 131

A company is using Amazon Route 53 Resolver for its hybrid DNS infrastructure. The company has set up Route 53 Resolver forwarding rules for authoritative domains that are hosted on on-premises DNS servers.

A new security mandate requires the company to implement a solution to log and query DNS traffic that goes to the on-premises DNS servers. The logs must show details of the source IP address of the instance from which the query originated. The logs also must show the DNS name that was requested in Route 53 Resolver. Which solution will meet these requirements?

- A. Use VPC Traffic Mirroring
- B. Configure all relevant elastic network interfaces as the traffic source, include amazon-dns in the mirror filter, and set Amazon CloudWatch Logs as the mirror target
- C. Use CloudWatch Insights on the mirror session logs to run queries on the source IP address and DNS name.
- D. Configure VPC flow logs on all relevant VPC
- E. Send the logs to an Amazon S3 bucket
- F. Use Amazon Athena to run SQL queries on the source IP address and DNS name.
- G. Configure Route 53 Resolver query logging on all relevant VPC
- H. Send the logs to Amazon CloudWatch Log
- I. Use CloudWatch Insights to run queries on the source IP address and DNS name.
- J. Modify the Route 53 Resolver rules on the authoritative domains that forward to the on-premises DNS server
- K. Send the logs to an Amazon S3 bucket
- L. Use Amazon Athena to run SQL queries on the source IP address and DNS name.

Answer: C

Explanation:

The correct answer is C. Configure Route 53 Resolver query logging on all relevant VPCs. Send the logs to Amazon CloudWatch Logs. Use CloudWatch Insights to run queries on the source IP address and DNS name.

According to the AWS documentation¹, Route 53 Resolver query logging lets you log the DNS queries that Route 53 Resolver handles for your VPCs. You can send the logs to CloudWatch Logs, Amazon S3, or Kinesis Data Firehose. The logs include information such as the following:

- The AWS Region where the VPC was created
- The ID of the VPC that the query originated from
- The IP address of the instance that the query originated from
- The instance ID of the resource that the query originated from
- The date and time that the query was first made
- The DNS name requested (such as prod.example.com)
- The DNS record type (such as A or AAAA)
- The DNS response code, such as NoError or ServFail
- The DNS response data, such as the IP address that is returned in response to the DNS query

You can use CloudWatch Insights to run queries on your log data and analyze the results using graphs and statistics². You can filter and aggregate the log data based on any field, and use operators and functions to perform calculations and transformations. For example, you can use CloudWatch Insights to find out how many queries were made for a specific domain name, or which instances made the most queries.

Therefore, this solution meets the requirements of logging and querying DNS traffic that goes to the on-premises DNS servers, showing details of the source IP address of the instance from which the query originated, and the DNS name that was requested in Route 53 Resolver.

The other options are incorrect because:

- A. Using VPC Traffic Mirroring would not capture the DNS queries that go to the on-premises DNS servers, because Traffic Mirroring only copies network traffic from an elastic network interface of an EC2 instance to a target for analysis³. Traffic Mirroring does not include traffic that goes through a Route 53 Resolver outbound endpoint, which is used to forward queries to on-premises DNS servers⁴. Therefore, this solution would not meet the requirements.
- B. Configuring VPC flow logs on all relevant VPCs would not capture the DNS name that was requested in Route 53 Resolver, because flow logs only record information about the IP traffic going to and from network interfaces in a VPC⁵. Flow logs do not include any information about the content or payload of a packet, such as a DNS query or response. Therefore, this solution would not meet the requirements.
- D. Modifying the Route 53 Resolver rules on the authoritative domains that forward to the on-premises DNS servers would not enable logging of DNS queries, because Resolver rules only specify how to forward queries for specified domain names to your network⁶. Resolver rules do not have any logging functionality by themselves. Therefore, this solution would not meet the requirements. References:

1: Resolver query logging - Amazon Route 53 2: Analyzing log data with CloudWatch Logs Insights - Amazon CloudWatch 3: What is Traffic Mirroring? - Amazon Virtual Private Cloud 4: Outbound Resolver endpoints - Amazon Route 53 5: Logging IP traffic using VPC Flow Logs - Amazon Virtual Private Cloud 6: Managing forwarding rules - Amazon Route 53

NEW QUESTION 136

.....

Thank You for Trying Our Product

We offer two products:

1st - We have Practice Tests Software with Actual Exam Questions

2nd - Questions and Answers in PDF Format

AWS-Certified-Security-Specialty Practice Exam Features:

- * AWS-Certified-Security-Specialty Questions and Answers Updated Frequently
- * AWS-Certified-Security-Specialty Practice Questions Verified by Expert Senior Certified Staff
- * AWS-Certified-Security-Specialty Most Realistic Questions that Guarantee you a Pass on Your FirstTry
- * AWS-Certified-Security-Specialty Practice Test Questions in Multiple Choice Formats and Updatesfor 1 Year

100% Actual & Verified — Instant Download, Please Click
[Order The AWS-Certified-Security-Specialty Practice Test Here](#)