



**Amazon**

## **Exam Questions AWS-Certified-Security-Specialty**

Amazon AWS Certified Security - Specialty

### NEW QUESTION 1

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

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

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

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

Which solution will meet these requirements?

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

**Answer: B**

### Explanation:

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

### NEW QUESTION 2

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

Which solution will meet these requirements?

- A. 1 Put all users into an IAM group with an access policy granting access to the S3 bucket.
- B. Have the account creation trigger an IAM Lambda function that manages the bucket policy, allowing access to accounts listed in the policy only.
- C. Add an SCP to the Organizations master account, allowing all principals access to the bucket.
- D. Specify the organization ID in the global key condition element of a bucket policy, allowing all principals access.

**Answer: D**

### NEW QUESTION 3

A security engineer wants to use Amazon Simple Notification Service (Amazon SNS) to send email alerts to a company's security team for Amazon GuardDuty findings

that have a High severity level. The security engineer also wants to deliver these findings to a visualization tool for further examination.

Which solution will meet these requirements?

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

- . Deliver email alerts to the security team by configuring an SNS topic as a second target for EventBridge
- . Use event pattern matching with an EventBridge event rule to send only High severity findings in the alerts.

**Answer: C**

#### NEW QUESTION 4

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

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

**Answer: C**

#### Explanation:

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

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

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

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

The other options are incorrect because:

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

References:

1: Using bucket policies - Amazon Simple Storage Service

#### NEW QUESTION 5

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 ©.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 6

A company has a large fleet of Linux Amazon EC2 instances and Windows EC2 instances that run in private subnets. The company wants all remote administration to be performed as securely as possible in the AWS Cloud. Which solution will meet these requirements?

- A. Do not use SSH-RSA private keys during the launch of new instance
- B. Implement AWS Systems Manager Session Manager.
- C. Generate new SSH-RSA private keys for existing instance
- D. Implement AWS Systems Manager Session Manager.
- E. Do not use SSH-RSA private keys during the launch of new instance
- F. Configure EC2 Instance Connect.
- G. Generate new SSH-RSA private keys for existing instance
- H. Configure EC2 Instance Connect.

**Answer:** A

#### Explanation:

AWS Systems Manager Session Manager is a fully managed service that allows you to securely and remotely administer your EC2 instances without the need to open inbound ports, maintain bastion hosts, or manage SSH keys. Session Manager provides an interactive browser-based shell or CLI access to your instances, as well as port forwarding and auditing capabilities. Session Manager works with both Linux and Windows instances, and supports hybrid environments and edge devices.

EC2 Instance Connect is a feature that allows you to use SSH to connect to your Linux instances using short-lived keys that are generated on demand and delivered securely through the AWS metadata service. EC2 Instance Connect does not require any additional software installation or configuration on the instance, but it does require you to use SSH-RSA keys during the launch of new instances.

The correct answer is to use Session Manager, as it provides more security and flexibility than EC2 Instance Connect, and does not require SSH-RSA keys or inbound ports. Session Manager also works with Windows instances, while EC2 Instance Connect does not.

Verified References:

- <https://docs.aws.amazon.com/systems-manager/latest/userguide/session-manager.html>
- <https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/Connect-using-EC2-Instance-Connect.html>
- <https://repost.aws/questions/QUnV4R9EoeSdW0GT3cKBUR7w/what-is-the-difference-between-ec-2-ins>

#### NEW QUESTION 7

A recent security audit found that IAM CloudTrail logs are insufficiently protected from tampering and unauthorized access Which actions must the Security Engineer take to address these audit findings? (Select THREE )

- A. Ensure CloudTrail log file validation is turned on
- B. Configure an S3 lifecycle rule to periodically archive CloudTrail logs into Glacier for long-term storage
- C. Use an S3 bucket with tight access controls that exists in a separate account
- D. Use Amazon Inspector to monitor the file integrity of CloudTrail log files.
- E. Request a certificate through ACM and use a generated certificate private key to encrypt CloudTrail log files
- F. Encrypt the CloudTrail log files with server-side encryption with IAM KMS-managed keys (SSE-KMS)

**Answer:** ADE

#### NEW QUESTION 8

A company wants to establish separate IAM Key Management Service (IAM KMS) keys to use for different IAM services. The company's security engineer created the following key policy to allow the infrastructure deployment team to create encrypted Amazon Elastic Block Store (Amazon EBS) volumes by assuming the InfrastructureDeployment IAM role:



```
{
  "Version": "2012-10-17",
  "Id": "key-policy-eps",
  "Statement": [
    {
      "Sid": "Enable IAM User Permissions",
      "Effect": "Allow",
      "Principal": {
        "AWS": "arn:aws:iam::123456789012:root"
      },
      "Action": "kms:*",
      "Resource": "*"
    },
    {
      "Sid": "Allow use of the key",
      "Effect": "Allow",
      "Principal": {
        "AWS": "arn:aws:iam::123456789012:role/aws-reserved/sso.amazonaws.com/InfrastructureDeployment"
      },
      "Action": [
        "kms:Encrypt",
        "kms:Decrypt",
        "kms:ReEncrypt*",
        "kms:GenerateDataKey*",
        "kms:DescribeKey",
        "kms:CreateGrant",
        "kms:ListGrants",
        "kms:RevokeGrant"
      ],
      "Resource": "*",
      "Condition": {
        "StringEquals": {
          "kms:ViaService": "ec2.us-west-2.amazonaws.com"
        }
      }
    }
  ]
}
```

The security engineer recently discovered that IAM roles other than the InfrastructureDeployment role used this key (or other services). Which change to the policy should the security engineer make to resolve these issues?

- A. In the statement block that contains the Sid "Allow use of the key", under the "Condition" block, change StringEquals to StringLike.
- B. In the policy document, remove the statement block that contains the Sid "Enable IAM User Permissions". Add key management policies to the KMS policy.
- C. In the statement block that contains the Sid "Allow use of the Key", under the "Condition" block, change the Kms:ViaService value to ec2.us-east-1.amazonaws.com.
- D. In the policy document, add a new statement block that grants the kms:Disable permission to the security engineer's IAM role.

**Answer: C**

#### Explanation:

To resolve the issues, the security engineer should make the following change to the policy:

➤ In the statement block that contains the Sid "Allow use of the key", under the "Condition" block, change the Kms:ViaService value to ec2.us-east-1.amazonaws.com. This allows the security engineer to restrict the use of the key to only EC2 service in the us-east-1 region, and prevent other services from using the key.

#### NEW QUESTION 9

Auditors for a health care company have mandated that all data volumes be encrypted at rest Infrastructure is deployed mainly via IAM CloudFormation however third-party frameworks and manual deployment are required on some legacy systems

What is the BEST way to monitor, on a recurring basis, whether all EBS volumes are encrypted?

- A. On a recurring basis, update an IAM user policies to require that EC2 instances are created with an encrypted volume
- B. Configure an IAM Config rule to run on a recurring basis for volume encryption
- C. Set up Amazon Inspector rules for volume encryption to run on a recurring schedule
- D. Use CloudWatch Logs to determine whether instances were created with an encrypted volume

**Answer: B**

#### Explanation:

To support answer B, use the reference <https://d1.IAMstatic.com/whitepapers/IAM-security-whitepaper.pdf> "For example, IAM Config provides a managed IAM Config Rules to ensure that encryption is turned on for all EBS volumes in your account."

#### NEW QUESTION 10

A developer has created an AWS Lambda function in a company's development account. The Lambda function requires the use of an AWS Key Management Service (AWS KMS) customer managed key that exists in a security account that the company's security team controls. The developer obtains the ARN of the KMS key from a previous Lambda function in the development account. The previous Lambda function had been working properly with the KMS key.

When the developer uses the ARN and tests the new Lambda function an error message states that access is denied to the KMS key in the security account. The developer tests the previous Lambda function that uses the same KMS key and discovers that the previous Lambda function still can encrypt data as expected.

A security engineer must resolve the problem so that the new Lambda function in the development account can use the KMS key from the security account.

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

- A. In the security account configure an IAM role for the new Lambda function

- B. Attach an IAM policy that allows access to the KMS key in the security account.
- C. In the development account configure an IAM role for the new Lambda function.
- D. Attach a key policy that allows access to the KMS key in the security account.
- E. In the development account configure an IAM role for the new Lambda function.
- F. Attach an IAM policy that allows access to the KMS key in the security account.
- G. Configure a key policy for the KMS key in the security account to allow access to the IAM role of the new Lambda function in the security account.
- H. Configure a key policy for the KMS key in the security account to allow access to the IAM role of the new Lambda function in the development account.

**Answer:** CE

**Explanation:**

To allow cross-account access to a KMS key, the key policy of the KMS key must grant permission to the external account or principal, and the IAM policy of the external account or principal must delegate the key policy permission. In this case, the new Lambda function in the development account needs to use the KMS key in the security account, so the key policy of the KMS key must allow access to the IAM role of the new Lambda function in the development account (option E), and the IAM role of the new Lambda function in the development account must have an IAM policy that allows access to the KMS key in the security account (option C). Option A is incorrect because it creates an IAM role for the new Lambda function in the security account, not in the development account. Option B is incorrect because it attaches a key policy to an IAM role, which is not valid. Option D is incorrect because it allows access to the IAM role of the new Lambda function in the security account, not in the development account. Verified References:

➤ <https://docs.aws.amazon.com/autoscaling/ec2/userguide/key-policy-requirements-EBS-encryption.html>

**NEW QUESTION 10**

A company has an organization in AWS Organizations that includes dedicated accounts for each of its business units. The company is collecting all AWS CloudTrail logs from the accounts in a single Amazon S3 bucket in the top-level account. The company's IT governance team has access to the top-level account. A security engineer needs to allow each business unit to access its own CloudTrail logs.

The security engineer creates an IAM role in the top-level account for each of the other accounts. For each role the security engineer creates an IAM policy to allow read-only permissions to objects in the S3 bucket with the prefix of the respective logs.

Which action must the security engineer take in each business unit account to allow an IAM user in that account to read the logs?

- A. Attach a policy to the IAM user to allow the user to assume the role that was created in the top-level account.
- B. Specify the role's ARN in the policy.
- C. Create an SCP that grants permissions to the top-level account.
- D. Use the root account of the business unit account to assume the role that was created in the top-level account.
- E. Specify the role's ARN in the policy.
- F. Forward the credentials of the IAM role in the top-level account to the IAM user in the business unit account.

**Answer:** A

**Explanation:**

To allow an IAM user in one AWS account to access resources in another AWS account using IAM roles, the following steps are required:

- Create a role in the AWS account that contains the resources (the trusting account) and specify the AWS account that contains the IAM user (the trusted account) as a trusted entity in the role's trust policy. This allows users from the trusted account to assume the role and access resources in the trusting account.
- Attach a policy to the IAM user in the trusted account that allows the user to assume the role in the trusting account. The policy must specify the ARN of the role that was created in the trusting account.
- The IAM user can then switch roles or use temporary credentials to access the resources in the trusting account.

Verified References:

- <https://repost.aws/knowledge-center/cross-account-access-iam>
- [https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial\\_cross-account-with-roles.html](https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial_cross-account-with-roles.html)

**NEW QUESTION 11**

An organization has a multi-petabyte workload that it is moving to Amazon S3, but the CISO is concerned about cryptographic wear-out and the blast radius if a key is compromised. How can the CISO be assured that IAM KMS and Amazon S3 are addressing the concerns? (Select TWO )

- A. There is no API operation to retrieve an S3 object in its encrypted form.
- B. Encryption of S3 objects is performed within the secure boundary of the KMS service.
- C. S3 uses KMS to generate a unique data key for each individual object.
- D. Using a single master key to encrypt all data includes having a single place to perform audits and usage validation.
- E. The KMS encryption envelope digitally signs the master key during encryption to prevent cryptographic wear-out.

**Answer:** CE

**Explanation:**

because these are the features that can address the CISO's concerns about cryptographic wear-out and blast radius. Cryptographic wear-out is a phenomenon that occurs when a key is used too frequently or for too long, which increases the risk of compromise or degradation. Blast radius is a measure of how much damage a compromised key can cause to the encrypted data. S3 uses KMS to generate a unique data key for each individual object, which reduces both cryptographic wear-out and blast radius. The KMS encryption envelope digitally signs the master key during encryption, which prevents cryptographic wear-out by ensuring that only authorized parties can use the master key. The other options are either incorrect or irrelevant for addressing the CISO's concerns.

**NEW QUESTION 15**

A security engineer receives an IAM abuse email message. According to the message, an Amazon EC2 instance that is running in the security engineer's IAM account is sending phishing email messages.

The EC2 instance is part of an application that is deployed in production. The application runs on many EC2 instances behind an Application Load Balancer. The instances run in an Amazon EC2 Auto Scaling group across multiple subnets and multiple Availability Zones.

The instances normally communicate only over the HTTP, HTTPS, and MySQL protocols. Upon investigation, the security engineer discovers that email messages are being sent over port 587. All other traffic is normal.

The security engineer must create a solution that contains the compromised EC2 instance, preserves forensic evidence for analysis, and minimizes application downtime. Which combination of steps must the security engineer take to meet these requirements? (Select THREE.)

- A. Add an outbound rule to the security group that is attached to the compromised EC2 instance to deny traffic to 0.0.0.0/0 and port 587.

- B. Add an outbound rule to the network ACL for the subnet that contains the compromised EC2 instance to deny traffic to 0.0.0.0/0 and port 587.
- C. Gather volatile memory from the compromised EC2 instance
- D. Suspend the compromised EC2 instance from the Auto Scaling group
- E. Then take a snapshot of the compromised EC2 instance
- F. v
- G. Take a snapshot of the compromised EC2 instance
- H. Suspend the compromised EC2 instance from the Auto Scaling group
- I. Then gather volatile memory from the compromised EC2 instance.
- J. Move the compromised EC2 instance to an isolated subnet that has a network ACL that has no inbound rules or outbound rules.
- K. Replace the existing security group that is attached to the compromised EC2 instance with a new security group that has no inbound rules or outbound rules.

**Answer:** ACE

#### NEW QUESTION 20

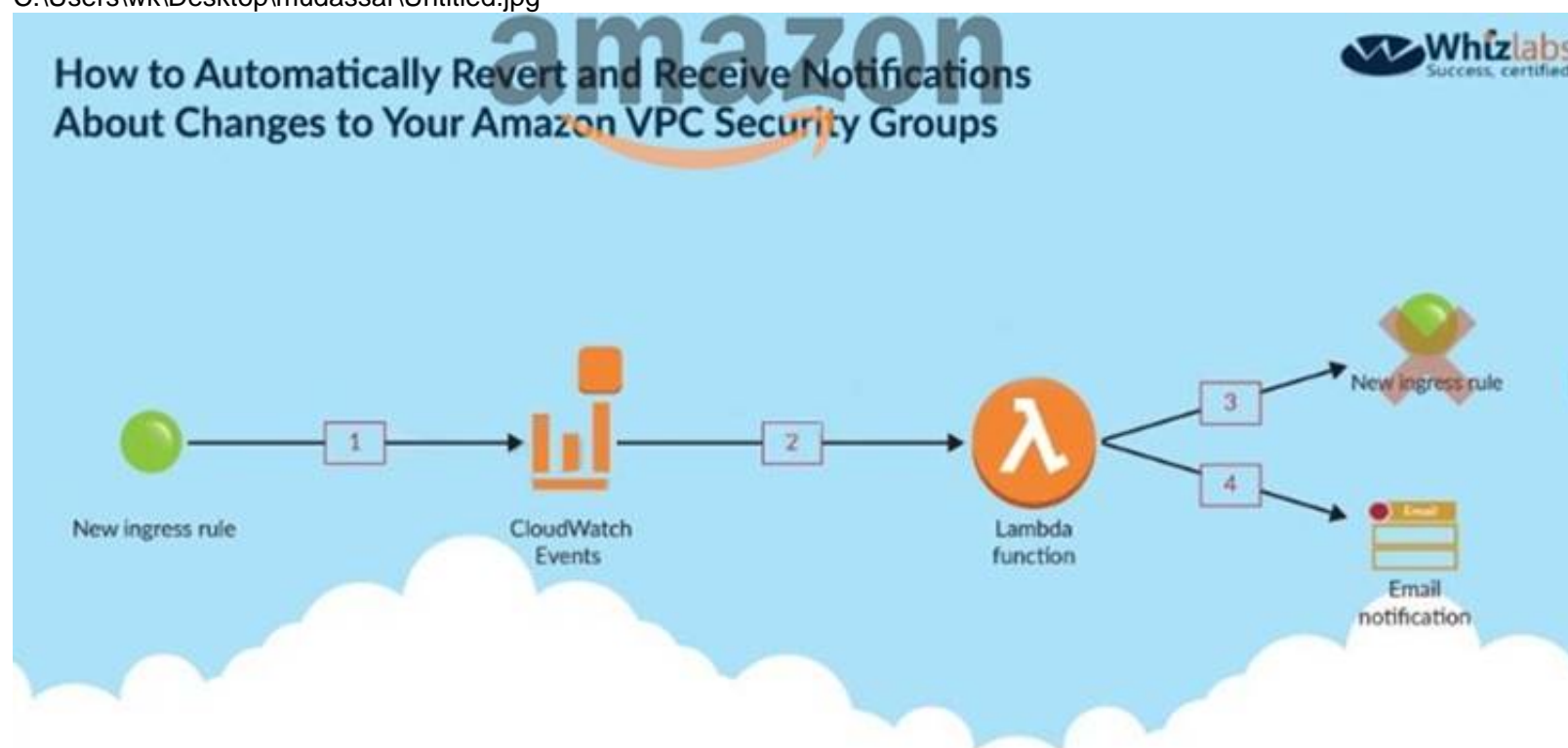
Your company has a set of EC2 Instances defined in IAM. These EC2 Instances have strict security groups attached to them. You need to ensure that changes to the Security groups are noted and acted on accordingly. How can you achieve this?  
 Please select:

- 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 for 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 changes, Option B is invalid because you need to use Cloudwatch Events to check for changes

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.amazonaws.com/blogs/security/how-to-automatically-revert-and-receive-notifications-about-changes-to-vpc-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 22

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 27

A company has an application that uses dozens of Amazon DynamoDB tables to store data. Auditors find that the tables do not comply with the company's data



protection policy.

The company's retention policy states that all data must be backed up twice each month: once at midnight on the 15th day of the month and again at midnight on the 25th day of the month. The company must retain the backups for 3 months.

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

- A. Use the DynamoDB on-demand backup capability to create a backup pla
- B. Con-figure a lifecycle policy to expire backups after 3 months.
- C. Use AWS DataSync to create a backup pla
- D. Add a backup rule that includes a retention period of 3 months.
- E. Use AVVS Backup to create a backup pla
- F. Add a backup rule that includes a retention period of 3 months.
- G. Set the backup frequency by using a cron schedule expressio
- H. Assign each DynamoDB table to the backup plan.
- I. Set the backup frequency by using a rate schedule expressio
- J. Assign each DynamoDB table to the backup plan.

**Answer:** AD

#### NEW QUESTION 28

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

How should the security engineer build the MOST secure solution?

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

**Answer:** D

#### Explanation:

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

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

#### NEW QUESTION 33

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 sensi-tive data.

A security engineer must implement a solution that prevents objects from resid-ing 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 hour
- 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 up-loaded to the S3 bucke
- F. Use S3 Intelligent-Tiering to expire objects that have been in the S3 bucket for 72 hours.

**Answer:** B

#### NEW QUESTION 37

A security engineer needs to develop a process to investigate and respond to po-tential security events on a company's Amazon EC2 instances. All the EC2 in-stances 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 secu-rity 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 inci-dent 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 cap-tured as part of the process. Which combination of steps should the security engineer take to meet these re-quirements with the LEAST operational overhead? (Select THREE.)

- A. Gather any relevant metadata for the compromised EC2 instanc
- B. Enable ter-mination protectio
- C. Isolate the instance by updating the instance's secu-rity groups to restrict acces
- D. Detach the instance from anyAuto Scaling groups that the instance is a member o
- E. Deregister the instance from any Elastic Load Balancing (ELB) resources.
- F. Gather any relevant metadata for the compromised EC2 instanc
- G. Enable ter-mination protectio



- 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 39

A company hosts an end user application on AWS. Currently, the company deploys the application on Amazon EC2 instances behind an Elastic Load Balancer. The company wants to configure end-to-end encryption between the Elastic Load Balancer and the EC2 instances. Which solution will meet this requirement with the LEAST operational effort?

- A. Use Amazon issued AWS Certificate Manager (ACM) certificates on the EC2 instances and the Elastic Load Balancer to configure end-to-end encryption
- B. Import a third-party SSL certificate to AWS Certificate Manager (ACM). Install the third-party certificate on the EC2 instances. Associate the ACM imported third-party certificate with the Elastic Load Balancer
- C. Deploy AWS CloudHSM. Import a third-party certificate. Configure the EC2 instances and the Elastic Load Balancer to use the CloudHSM imported certificate
- D. Import a third-party certificate bundle to AWS Certificate Manager (ACM). Install the third-party certificate on the EC2 instances. Associate the ACM imported third-party certificate with the Elastic Load Balancer.

**Answer:** A

#### Explanation:

To configure end-to-end encryption between the Elastic Load Balancer and the EC2 instances with the least operational effort, the most appropriate solution would be to use Amazon issued AWS Certificate Manager (ACM) certificates on the EC2 instances and the Elastic Load Balancer to configure end-to-end encryption.

AWS Certificate Manager - Amazon Web Services : Elastic Load Balancing - Amazon Web

Services : Amazon Elastic Compute Cloud - Amazon Web Services : AWS Certificate Manager - Amazon Web Services

#### NEW QUESTION 41

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

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

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

**Answer:** BC

#### Explanation:

The correct answer is B and C.

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

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

\* C. Allow port 22 from 192.168.100.0/24.

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

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

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

\* D. Allow port 22 from 10.0.1.0/24.

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

\* E. Allow port 443 from 10.0.1.0/24.

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

#### NEW QUESTION 44

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

Which solution meets these requirements?

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

**Answer:** A

#### NEW QUESTION 48

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 49**

A Security Engineer creates an Amazon S3 bucket policy that denies access to all users. A few days later, the Security Engineer adds an additional statement to the bucket policy to allow read-only access to one other employee. Even after updating the policy, the employee still receives an access denied message. What is the likely cause of this access denial?

- A. The ACL in the bucket needs to be updated
- B. The IAM policy does not allow the user to access the bucket
- C. It takes a few minutes for a bucket policy to take effect
- D. The allow permission is being overridden by the deny

**Answer:** D

**NEW QUESTION 54**

A company has AWS accounts in an organization in AWS Organizations. The organization includes a dedicated security account. All AWS account activity across all member accounts must be logged and reported to the dedicated security account. The company must retain all the activity logs in a secure storage location within the dedicated security account for 2 years. No changes or deletions of the logs are allowed. Which combination of steps will meet these requirements with the LEAST operational overhead? (Select TWO.)

- A. In the dedicated security account, create an Amazon S3 bucke
- B. Configure S3 Object Lock in compliance mode and a retention period of 2 years on the S3 bucke
- C. Set the bucket policy to allow the organization's management account to write to the S3 bucket.
- D. In the dedicated security account, create an Amazon S3 bucke
- E. Configure S3 Object Lock in compliance mode and a retention period of 2 years on the S3 bucke
- F. Set the bucket policy to allow the organization's member accounts to write to the S3 bucket.
- G. In the dedicated security account, create an Amazon S3 bucket that has an S3 Lifecycle configuration that expires objects after 2 year
- H. Set the bucket policy to allow the organization's member accounts to write to the S3 bucket.
- I. Create an AWS Cloud Trail trail for the organizatio
- J. Configure logs to be delivered to the logging Amazon S3 bucket in the dedicated security account.
- K. Turn on AWS CloudTrail in each accoun
- L. Configure logs to be delivered to an Amazon S3 bucket that is created in the organization's management accoun
- M. Forward the logs to the S3 bucket in the dedicated security account by using AWS Lambda and Amazon Kinesis Data Firehose.

**Answer:** BD

**Explanation:**

The correct answer is B and D. In the dedicated security account, create an Amazon S3 bucket. Configure S3 Object Lock in compliance mode and a retention period of 2 years on the S3 bucket. Set the bucket policy to allow the organization's member accounts to write to the S3 bucket. Create an AWS CloudTrail trail for the organization. Configure logs to be delivered to the logging Amazon S3 bucket in the dedicated security account.

According to the AWS documentation, AWS CloudTrail is a service that enables governance, compliance, operational auditing, and risk auditing of your AWS account. With CloudTrail, you can log, continuously monitor, and retain account activity related to actions across your AWS infrastructure. CloudTrail provides event history of your AWS account activity, including actions taken through the AWS Management Console, AWS SDKs, command line tools, and other AWS services.

To use CloudTrail 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 CloudTrail as a service principal for AWS Organizations, which lets you create an organization trail that applies to all accounts in your organization. An organization trail logs events for all AWS Regions and delivers the log files to an S3 bucket that you specify.

To create an organization trail, you need to use an administrator account, such as the organization's management account or a delegated administrator account. You can then configure the trail to deliver logs to an S3 bucket in the dedicated security account. This will ensure that all account activity across all member accounts and regions is logged and reported to the security account.

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 CloudTrail logs, you need to create an S3 bucket in the dedicated security account that will store the logs from the organization trail. You can then configure S3 Object Lock on the bucket to prevent objects from being deleted or overwritten for a fixed amount of time or indefinitely. You can also enable compliance mode on the bucket, which prevents any user, including the root user in your account, from deleting or modifying a locked object until it reaches its retention date.

To set a retention period of 2 years on the S3 bucket, you need to create a default retention configuration for the bucket that specifies a retention mode (either governance or compliance) and a retention period (either a number of days or a date). You can then set the bucket policy to allow the organization's member accounts to write to the S3 bucket. This will ensure that all logs are retained in a secure storage location within the security account for 2 years and no changes or deletions are allowed.

Option A is incorrect because setting the bucket policy to allow the organization's management account to write to the S3 bucket is not sufficient, as it will not grant access to the other member accounts in the organization.

Option C is incorrect because using an S3 Lifecycle configuration that expires objects after 2 years is not secure, as it will allow users to delete or modify objects before they expire.

Option E is incorrect because using Lambda and Kinesis Data Firehose to forward logs from one S3 bucket to another is not necessary, as CloudTrail can directly deliver logs to an S3 bucket in another account. It also introduces additional operational overhead and complexity.

#### NEW QUESTION 55

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 58

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 SSO
- 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-elements](https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scps_syntax.html#scp-elements)

#### NEW QUESTION 59

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

Which solution will meet these requirements?

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

**Answer: D**

#### Explanation:

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

#### NEW QUESTION 60

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



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

- A. Specify the deletion time of the key material during KMS key creatio
- B. Create a custom AWS Config rule to assess the key's scheduleddeletio
- C. Configure the rule to trigger upon a configuration chang
- D. Send a message to an Amazon Simple Notification Service (Amazon SNS) topic if the key is scheduled for deletion.
- E. Create an Amazon EventBridge rule to detect KMS API calls of DeleteAlia
- F. Create an AWS Lambda function to send an Amazon Simple Notification Service (Amazon SNS) message to the compan
- G. Add the Lambda function as the target of the EventBridge rule.
- H. Create an Amazon EventBridge rule to detect KMS API calls of DisableKey and ScheduleKeyDeletion.Create an AWS Lambda function to send an Amazon Simple Notification Service (Amazon SNS) message to the compan
- I. Add the Lambda function as the target of the EventBridge rule.
- J. Create an Amazon Simple Notification Service (Amazon SNS) policy to detect KMS API calls of RevokeGrant and ScheduleKeyDeletion.Create an AWS Lambda function to generate the alarm and send the notification to the compan
- K. Add the Lambda function as the target of the SNS policy.

**Answer: C**

**Explanation:**

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

References: : AWS KMS Developer Guide

**NEW QUESTION 64**

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 policie
- 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 Manage
- E. Run an assessment for all AWS Regions for all accounts.
- F. Ensure that Amazon Inspector agents are installed on all Amazon EC2 in-stances in all accounts.

**Answer: A**

**NEW QUESTION 66**

A security engineer needs to build a solution to turn IAM CloudTrail back on in multiple IAM Regions in case it is ever turned off. What is the MOST efficient way to implement this solution?

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

**Answer: B**

**NEW QUESTION 68**

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

How can the security engineer implement this solution?

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

**Answer: C**

**NEW QUESTION 71**

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

A.

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

B. A computer code with black text Description automatically generated

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

C. A computer code with black text Description automatically generated

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

D. A computer code with text Description automatically generated

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

**Answer: C**

**Explanation:**

[https://docs.aws.amazon.com/IAM/latest/UserGuide/reference\\_policies\\_examples\\_aws\\_deny-requested-region.h](https://docs.aws.amazon.com/IAM/latest/UserGuide/reference_policies_examples_aws_deny-requested-region.h)

**NEW QUESTION 76**

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:1}}.
- 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 lifecycle<sup>1</sup>. Secrets Manager integrates with AWS CloudFormation, which allows you to reference secrets from your templates using the {{resolve:secretsmanager:...}} syntax<sup>2</sup>. 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 Store<sup>3</sup>. 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 tables<sup>4</sup>. 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 buckets<sup>5</sup>. 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 81**

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

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

A)



Apply the following SCP:

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

B)

Apply the following SCP:

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

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

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

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

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

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

A. Option A

B. Option B

C. Option C

D. Option D

E. Option E

F. Option F

**Answer: ACE**

#### NEW QUESTION 84

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

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

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

**Answer:** BD

#### Explanation:

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

#### NEW QUESTION 86

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

How can a security engineer meet this requirement?

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

**Answer:** A

#### NEW QUESTION 91

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

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

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

**Answer:** A

#### Explanation:

➤ Option A: This option meets the requirements of following security best practices and configuring sensitive database credentials in the CloudFormation template. A dynamic reference is a way to specify external values that are stored and managed in other services, such as Secrets Manager, in the stack templates<sup>1</sup>. When using a dynamic reference, CloudFormation retrieves the value of the specified reference when necessary during stack and change set operations<sup>1</sup>. Dynamic references can be used for certain resources that support them, such as `AWS::RDS::DBInstance`<sup>1</sup>. By using a dynamic reference to reference the database credentials in Secrets Manager, the company can leverage the existing integration between these services and avoid hardcoding the secret information in the template. Secrets Manager is a service that helps you protect secrets needed to access your applications, services, and IT resources<sup>2</sup>. Secrets Manager enables you to rotate, manage, and retrieve database credentials, API keys, and other secrets throughout their lifecycle<sup>2</sup>.

#### NEW QUESTION 96

A company has hundreds of AWS accounts in an organization in AWS Organizations. The company operates out of a single AWS Region. The company has a dedicated security tooling AWS account in the organization. The security tooling account is configured as the organization's delegated administrator for Amazon GuardDuty and AWS Security Hub. The company has configured the environment to automatically enable GuardDuty and Security Hub for existing AWS accounts and new AWS accounts.

The company is performing control tests on specific GuardDuty findings to make sure that the company's security team can detect and respond to security events. The security team launched an Amazon EC2 instance and attempted to run DNS requests against a test domain, example.com, to generate a DNS finding.

However, the GuardDuty finding was never created in the Security Hub delegated administrator account.

Why was the finding not created in the Security Hub delegated administrator account?

- A. VPC flow logs were not turned on for the VPC where the EC2 instance was launched.
- B. The VPC where the EC2 instance was launched had the DHCP option configured for a custom OpenDNS resolver.
- C. The GuardDuty integration with Security Hub was never activated in the AWS account where the finding was generated.
- D. Cross-Region aggregation in Security Hub was not configured.

**Answer:** C

#### Explanation:

The correct answer is C. The GuardDuty integration with Security Hub was never activated in the AWS account where the finding was generated.

According to the AWS documentation<sup>1</sup>, GuardDuty findings are automatically sent to Security Hub only if the GuardDuty integration with Security Hub is enabled in

the same account and Region. This means that the security tooling account, which is the delegated administrator for both GuardDuty and Security Hub, must enable the GuardDuty integration with Security Hub in each member account and Region where GuardDuty is enabled. Otherwise, the findings from GuardDuty will not be visible in Security Hub.

The other options are incorrect because:

- VPC flow logs are not required for GuardDuty to generate DNS findings. GuardDuty uses VPC DNS logs, which are automatically enabled for all VPCs, to detect malicious or unauthorized DNS activity.
- The DHCP option configured for a custom OpenDNS resolver does not affect GuardDuty's ability to generate DNS findings. GuardDuty uses its own threat intelligence sources to identify malicious domains, regardless of the DNS resolver used by the EC2 instance.
- Cross-Region aggregation in Security Hub is not relevant for this scenario, because the company operates out of a single AWS Region. Cross-Region aggregation allows Security Hub to aggregate findings from multiple Regions into a single Region.

References:

1: Managing GuardDuty accounts with AWS Organizations : Amazon GuardDuty Findings : How Amazon GuardDuty Works : Cross-Region aggregation in AWS Security Hub

#### NEW QUESTION 99

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

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

**Answer: C**

#### Explanation:

the aws kms get-key-rotation-status command returns a boolean value that indicates whether automatic rotation of the customer master key (CMK) is enabled<sup>1</sup>. This command also shows the date and time when the CMK was last rotated<sup>2</sup>. The other options are not valid ways to check the CMK rotation status.

#### NEW QUESTION 102

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

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

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

**Answer: BD**

#### Explanation:

Amazon Kinesis and Amazon Elasticsearch are both suitable for forensic-logging solutions. Amazon Kinesis can collect, process, and analyze streaming data in real time<sup>3</sup>. Amazon Elasticsearch can store, search, and analyze log data using the popular open-source tool Elasticsearch. The other options are not designed for forensic-logging purposes. Amazon Athena is a query service that can analyze data in S3, Amazon SQS is a message queue service that can decouple and scale microservices, and Amazon EMR is a big data platform that can run Apache Spark and Hadoop clusters.

#### NEW QUESTION 103

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

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

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

**Answer: A**

#### Explanation:

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

#### NEW QUESTION 106

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

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

After these changes, the security engineer notices that the SSH connection is still active and usable. When the security engineer runs a ping command to the



public IP address of the target instance, the ping command is blocked.  
What should the security engineer do to isolate the target instance?

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

**Answer: C**

#### NEW QUESTION 108

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

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

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

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

Which solution will meet these requirements?

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

**Answer: D**

#### Explanation:

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

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

#### NEW QUESTION 113

A security engineer wants to evaluate configuration changes to a specific AWS resource to ensure that the resource meets compliance standards. However, the security engineer is concerned about a situation in which several configuration changes are made to the resource in quick succession. The security engineer wants to record only the latest configuration of that resource to indicate the cumulative impact of the set of changes.

Which solution will meet this requirement in the MOST operationally efficient way?

- A. Use AWS CloudTrail to detect the configuration changes by filtering API calls to monitor the changes. Use the most recent API call to indicate the cumulative impact of multiple calls
- B. Use AWS Config to detect the configuration changes and to record the latest configuration in case of multiple configuration changes.
- C. Use Amazon CloudWatch to detect the configuration changes by filtering API calls to monitor the change
- D. Use the most recent API call to indicate the cumulative impact of multiple calls.
- E. Use AWS Cloud Map to detect the configuration change
- F. Generate a report of configuration changes from AWS Cloud Map to track the latest state by using a sliding time window.

**Answer: B**

#### Explanation:

AWS Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources. AWS Config continuously monitors and records your AWS resource configurations and allows you to automate the evaluation of recorded configurations against desired configurations.

To evaluate configuration changes to a specific AWS resource and ensure that it meets compliance standards, the security engineer should use AWS Config to detect the configuration changes and to record the latest configuration in case of multiple configuration changes. This will allow the security engineer to view the current state of the resource and its compliance status, as well as its configuration history and timeline.

AWS Config records configuration changes as ConfigurationItems, which are point-in-time snapshots of the resource's attributes, relationships, and metadata. If multiple configuration changes occur within a short period of time, AWS Config records only the latest ConfigurationItem for that resource. This indicates the cumulative impact of the set of changes on the resource's configuration.

This solution will meet the requirement in the most operationally efficient way, as it leverages AWS Config's features to monitor, record, and evaluate resource configurations without requiring additional tools or services.

The other options are incorrect because they either do not record the latest configuration in case of multiple configuration changes (A, C), or do not use a valid service for evaluating resource configurations (D).

Verified References:

- <https://docs.aws.amazon.com/config/latest/developerguide/WhatIsConfig.html>
- <https://docs.aws.amazon.com/config/latest/developerguide/config-item-table.html>

#### NEW QUESTION 116

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

Which solution will meet these requirements?

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

**Answer: C**

**Explanation:**

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

#### NEW QUESTION 121

A company uses a third-party application to store encrypted data in Amazon S3. The company uses another third-party application that decrypts the data from Amazon S3 to ensure separation of duties. Between the applications, a Security Engineer warns to separate the permissions using IAM roles attached to Amazon EC2 instances. The company prefers to use native IAM services.

Which encryption method will meet these requirements?

- A. Use encrypted Amazon EBS volumes with Amazon default keys (IAM EBS)
- B. Use server-side encryption with customer-provided keys (SSE-C)
- C. Use server-side encryption with IAM KMS managed keys (SSE-KMS)
- D. Use server-side encryption with Amazon S3 managed keys (SSE-S3)

**Answer: C**

#### NEW QUESTION 126

A company hosts an application on Amazon EC2 that is subject to specific rules for regulatory compliance. One rule states that traffic to and from the workload must be inspected for network-level attacks. This involves inspecting the whole packet.

To comply with this regulatory rule, a security engineer must install intrusion detection software on a c5n.4xlarge EC2 instance. The engineer must then configure the software to monitor traffic to and from the application instances.

What should the security engineer do next?

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

**Answer: D**

#### NEW QUESTION 131

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

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

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

**Answer: C**

**Explanation:**

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

#### NEW QUESTION 135

Developers in an organization have moved from a standard application deployment to containers. The Security Engineer is tasked with ensuring that the containers are secure. Which strategies will reduce the attack surface and enhance the security of the containers? (Select TWO.)

- A. Use the containers to automate security deployments.
- B. Limit resource consumption (CPU, memory), networking connections, ports, and unnecessary container libraries.
- C. Segregate containers by host, function, and data classification.
- D. Use Docker Notary framework to sign task definitions.
- E. Enable container breakout at the host kernel.

**Answer: AC**

**Explanation:**

these are the strategies that can reduce the attack surface and enhance the security of the containers. Containers are a method of packaging and running applications in isolated environments. Using containers to automate security deployments can help ensure that security patches and updates are applied consistently and quickly across the container fleet. Segregating containers by host, function, and data classification can help limit the impact of a compromise and enforce the principle of least privilege. The other options are either irrelevant or risky for securing containers.

**NEW QUESTION 140**

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

What should the Security Engineer do to meet these requirements?

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

**Answer: B**

**NEW QUESTION 144**

Your development team is using access keys to develop an application that has access to S3 and DynamoDB. A new security policy has outlined that the credentials should not be older than 2 months, and should be rotated. How can you achieve this?

Please select:

- A. Use the application to rotate the keys in every 2 months via the SDK
- B. Use a script to query the creation date of the key
- C. If older than 2 months, create new access key and update all applications to use it inactivate the old key and delete it.
- D. Delete the user associated with the keys after every 2 month
- E. Then recreate the user again.
- F. Delete the IAM Role associated with the keys after every 2 month
- G. Then recreate the IAM Role again.

**Answer: B**

**Explanation:**

One can use the CLI command list-access-keys to get the access keys. This command also returns the "CreateDate" of the keys. If the CreateDate is older than 2 months, then the keys can be deleted.

The Returns list-access-keys CLI command returns information about the access key IDs associated with the specified IAM user. If there are none, the action returns an empty list

Option A is incorrect because you might as use a script for such maintenance activities Option C is incorrect because you would not rotate the users themselves

Option D is incorrect because you don't use IAM roles for such a purpose For more information on the CLI command, please refer to the below Link:

<http://docs.IAM.amazon.com/cli/latest/reference/iam/list-access-keys.html>

The correct answer is: Use a script to query the creation date of the keys. If older than 2 months, create new access key and update all applications to use it inactivate the old key and delete it.

Submit your Feedback/Queries to our Experts

**NEW QUESTION 148**

A company is designing a new application stack. The design includes web servers and backend servers that are hosted on Amazon EC2 instances. The design also includes an Amazon Aurora MySQL DB cluster.

The EC2 instances are in an Auto Scaling group that uses launch templates. The EC2 instances for the web layer and the backend layer are backed by Amazon Elastic Block Store (Amazon EBS) volumes. No layers are encrypted at rest. A security engineer needs to implement encryption at rest.

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

- A. Modify EBS default encryption settings in the target AWS Region to enable encryption
- B. Use an Auto Scaling group instance refresh.
- C. Modify the launch templates for the web layer and the backend layer to add AWS Certificate Manager (ACM) encryption for the attached EBS volume
- D. Use an Auto Scaling group instance refresh.
- E. Create a new AWS Key Management Service (AWS KMS) encrypted DB cluster from a snapshot of the existing DB cluster.
- F. Apply AWS Key Management Service (AWS KMS) encryption to the existing DB cluster.
- G. Apply AWS Certificate Manager (ACM) encryption to the existing DB cluster.

**Answer: AC**

**Explanation:**

<https://docs.aws.amazon.com/AuroraRDS/latest/AuroraUserGuide/Overview.Encryption.html> <https://aws.amazon.com/premiumsupport/knowledge-center/ebs-automatic-encryption/>

To implement encryption at rest for both the EC2 instances and the Aurora DB cluster, the following steps are required:

➤ For the EC2 instances, modify the EBS default encryption settings in the target AWS Region to enable encryption. This will ensure that any new EBS volumes created in that Region are encrypted by default using an AWS managed key. Alternatively, you can specify a customer managed key when creating new EBS volumes. For more information, see Amazon EBS encryption.

➤ Use an Auto Scaling group instance refresh to replace the existing EC2 instances with new ones that have encrypted EBS volumes attached. An instance refresh is a feature that helps you update all instances in an Auto Scaling group in a rolling fashion without the need to manage the instance replacement process manually. For more information, see Replacing Auto Scaling instances based on an instance refresh.

➤ For the Aurora DB cluster, create a new AWS Key Management Service (AWS KMS) encrypted DB cluster from a snapshot of the existing DB cluster. You can use either an AWS managed key or a customer managed key to encrypt the new DB cluster. You cannot enable or disable encryption for an existing DB cluster, so you have to create a new one from a snapshot. For more information, see Encrypting Amazon Aurora resources.



The other options are incorrect because they either do not enable encryption at rest for the resources (B, D), or they use the wrong service for encryption (E).  
Verified References:

- <https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSEncryption.html>
- <https://docs.aws.amazon.com/autoscaling/ec2/userguide/asg-instance-refresh.html>
- <https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/Overview.Encryption.html>

#### NEW QUESTION 149

A company has contracted with a third party to audit several AWS accounts. To enable the audit, cross- account IAM roles have been created in each account targeted for audit. The Auditor is having trouble accessing some of the accounts. Which of the following may be causing this problem? (Choose three.)

- A. The external ID used by the Auditor is missing or incorrect.
- B. The Auditor is using the incorrect password.
- C. The Auditor has not been granted sts:AssumeRole for the role in the destination account.
- D. The Amazon EC2 role used by the Auditor must be set to the destination account role.
- E. The secret key used by the Auditor is missing or incorrect.
- F. The role ARN used by the Auditor is missing or incorrect.

**Answer:** ACF

#### Explanation:

The following may be causing the problem for the Auditor:

- A. The external ID used by the Auditor is missing or incorrect. This is a possible cause, because the external ID is a unique identifier that is used to establish a trust relationship between the accounts. The external ID must match the one that is specified in the role's trust policy in the destination account1.
- C. The Auditor has not been granted sts:AssumeRole for the role in the destination account. This is a possible cause, because sts:AssumeRole is the API action that allows the Auditor to assume the cross-account role and obtain temporary credentials. The Auditor must have an IAM policy that allows them to call sts:AssumeRole for the role ARN in the destination account2.
- F. The role ARN used by the Auditor is missing or incorrect. This is a possible cause, because the role ARN is the Amazon Resource Name of the cross-account role that the Auditor wants to assume. The role ARN must be valid and exist in the destination account3.

#### NEW QUESTION 151

A company is migrating one of its legacy systems from an on-premises data center to AWS. The application server will run on AWS, but the database must remain in the on-premises data center for compliance reasons. The database is sensitive to network latency. Additionally, the data that travels between the on-premises data center and AWS must have IPsec encryption. Which combination of AWS solutions will meet these requirements? (Choose two.)

- A. AWS Site-to-Site VPN
- B. AWS Direct Connect
- C. AWS VPN CloudHub
- D. VPC peering
- E. NAT gateway

**Answer:** AB

#### Explanation:

The correct combination of AWS solutions that will meet these requirements is A. AWS Site-to-Site VPN and B. AWS Direct Connect.

- \* A. AWS Site-to-Site VPN is a service that allows you to securely connect your on-premises data center to your AWS VPC over the internet using IPsec encryption. This solution meets the requirement of encrypting the data in transit between the on-premises data center and AWS.
- \* B. AWS Direct Connect is a service that allows you to establish a dedicated network connection between your on-premises data center and your AWS VPC. This solution meets the requirement of reducing network latency between the on-premises data center and AWS.
- \* C. AWS VPN CloudHub is a service that allows you to connect multiple VPN connections from different locations to the same virtual private gateway in your AWS VPC. This solution is not relevant for this scenario, as there is only one on-premises data center involved.
- \* D. VPC peering is a service that allows you to connect two or more VPCs in the same or different regions using private IP addresses. This solution does not meet the requirement of connecting an on-premises data center to AWS, as it only works for VPCs.
- \* E. NAT gateway is a service that allows you to enable internet access for instances in a private subnet in your AWS VPC. This solution does not meet the requirement of connecting an on-premises data center to AWS, as it only works for outbound traffic from your VPC.

#### NEW QUESTION 155

A company's application team needs to host a MySQL database on IAM. According to the company's security policy, all data that is stored on IAM must be encrypted at rest. In addition, all cryptographic material must be compliant with FIPS 140-2 Level 3 validation.

The application team needs a solution that satisfies the company's security requirements and minimizes operational overhead.

Which solution will meet these requirements?

- A. Host the database on Amazon RD
- B. Use Amazon Elastic Block Store (Amazon EBS) for encryption.Use an IAM Key Management Service (IAM KMS) custom key store that is backed by IAM CloudHSM for key management.
- C. Host the database on Amazon RD
- D. Use Amazon Elastic Block Store (Amazon EBS) for encryption.Use an IAM managed CMK in IAM Key Management Service (IAM KMS) for key management.
- E. Host the database on an Amazon EC2 instanc
- F. Use Amazon Elastic Block Store (Amazon EBS) for encryptio
- G. Use a customer managed CMK in IAM Key Management Service (IAM KMS) for key management.
- H. Host the database on an Amazon EC2 instanc
- I. Use Transparent Data Encryption (TDE) for encryption and key management.

**Answer:** B

#### NEW QUESTION 160

A company has recently recovered from a security incident that required the restoration of Amazon EC2 instances from snapshots. The company uses an AWS Key Management Service (AWS KMS) customer managed key to encrypt all Amazon Elastic Block Store (Amazon EBS) snapshots. The company performs a gap analysis of its disaster recovery procedures and backup strategies. A security engineer needs to implement a solution so that the company can recover the EC2 instances if the AWS account is compromised and the EBS snapshots are deleted. Which solution will meet this requirement?

- A. Create a new Amazon S3 bucket
- B. Use EBS lifecycle policies to move EBS snapshots to the new S3 bucket
- C. Use lifecycle policies to move snapshots to the S3 Glacier Instant Retrieval storage class
- D. Use S3 Object Lock to prevent deletion of the snapshots.
- E. Use AWS Systems Manager to distribute a configuration that backs up all attached disks to Amazon S3.
- F. Create a new AWS account that has limited privilege
- G. Allow the new account to access the KMS key that encrypts the EBS snapshot
- H. Copy the encrypted snapshots to the new account on a recurring basis.
- I. Use AWS Backup to copy EBS snapshots to Amazon S3. Use S3 Object Lock to prevent deletion of the snapshots.

**Answer:** C

#### **Explanation:**

This solution meets the requirement of recovering the EC2 instances if the AWS account is compromised and the EBS snapshots are deleted. By creating a new AWS account with limited privileges, the company can isolate the backup snapshots from the main account and reduce the risk of accidental or malicious deletion. By allowing the new account to access the KMS key that encrypts the EBS snapshots, the company can ensure that the snapshots are copied in an encrypted form and can be decrypted when needed. By copying the encrypted snapshots to the new account on a recurring basis, the company can maintain a consistent backup schedule and minimize data loss.

#### NEW QUESTION 164

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