

# Amazon-Web-Services

## Exam Questions SCS-C02

AWS Certified Security - Specialty



### NEW QUESTION 1

- (Exam Topic 1)

A Security Engineer has several thousand Amazon EC2 instances split across production and development environments. Each instance is tagged with its environment. The Engineer needs to analyze and patch all the development EC2 instances to ensure they are not currently exposed to any common vulnerabilities or exposures (CVEs)

Which combination of steps is the MOST efficient way for the Engineer to meet these requirements? (Select TWO.)

- A. Log on to each EC2 instance, check and export the different software versions installed, and verify this against a list of current CVEs.
- B. Install the Amazon Inspector agent on all development instances Build a custom rule package, and configure Inspector to perform a scan using this custom rule on all instances tagged as being in the development environment.
- C. Install the Amazon Inspector agent on all development instances Configure Inspector to perform a scan using the CVE rule package on all instances tagged as being in the development environment.
- D. Install the Amazon EC2 System Manager agent on all development instances Issue the Run command to EC2 System Manager to update all instances
- E. Use IAM Trusted Advisor to check that all EC2 instances have been patched to the most recent version of operating system and installed software.

**Answer:** CD

### NEW QUESTION 2

- (Exam Topic 1)

An application running on Amazon EC2 instances generates log files in a folder on a Linux file system. The instances block access to the console and file transfer utilities, such as Secure Copy Protocol (SCP) and Secure File Transfer Protocol (SFTP). The Application Support team wants to automatically monitor the application log files so the team can set up notifications in the future.

A Security Engineer must design a solution that meets the following requirements:

- Make the log files available through an IAM managed service.
- Allow for automatic monitoring of the logs.
- Provide an Interlace for analyzing logs.
- Minimize effort.

Which approach meets these requirements^

- A. Modify the application to use the IAM SD
- B. Write the application logs lo an Amazon S3 bucket
- C. install the unified Amazon CloudWatch agent on the instances Configure the agent to collect the application log dies on the EC2 tile system and send them to Amazon CloudWatch Logs
- D. Install IAM Systems Manager Agent on the instances Configure an automation document to copy the application log files to IAM DeepLens
- E. Install Amazon Kinesis Agent on the instances Stream the application log files to Amazon Kinesis Data Firehose and sot the destination to Amazon Elasticsearch Service

**Answer:** D

### NEW QUESTION 3

- (Exam Topic 1)

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

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

**Answer:** ACD

### NEW QUESTION 4

- (Exam Topic 1)

A company has a website with an Amazon CloudFront HTTPS distribution, an Application Load Balancer (ALB) with multiple web instances for dynamic website content, and an Amazon S3 bucket for static website content. The company's security engineer recently updated the website security requirements:

- HTTPS needs to be enforced for all data in transit with specific ciphers.
- The CloudFront distribution needs to be accessible from the internet only. Which solution will meet these requirements?

- A. Set up an S3 bucket policy with the IAMsecuretransport key Configure the CloudFront origin access identity (OAI) with the S3 bucket Configure CloudFront to use specific cipher
- B. Enforce the ALB with an HTTPS listener only and select the appropriate security policy for the ciphers Link the ALB with IAM WAF to allow access from the CloudFront IP ranges.
- C. Set up an S3 bucket policy with the IAM:securetransport ke
- D. Configure the CloudFront origin access identity (OAI) with the S3 bucke
- E. Enforce the ALB with an HTTPS listener only and select the appropriate security policy for the ciphers.
- F. Modify the CloudFront distribution to use IAM WA
- G. Force HTTPS on the S3 bucket with specific ciphers in the bucket polic
- H. Configure an HTTPS listener only for the AL
- I. Set up a security group to limit access to the ALB from the CloudFront IP ranges
- J. Modify the CloudFront distribution to use the ALB as the origi
- K. Enforce an HTTPS listener on the AL
- L. Create a path-based routing rule on the ALB with proxies that connect lo Amazon S3. Create a bucket policy to allow access from these proxies only.

**Answer:** A

### Explanation:

<https://IAM.amazon.com/blogs/security/automatically-update-IAM-waf-ip-sets-with-IAM-ip-ranges/> to update CF ip range.

#### NEW QUESTION 5

- (Exam Topic 1)

An external Auditor finds that a company's user passwords have no minimum length. The company is currently using two identity providers:

- IAM IAM federated with on-premises Active Directory
- Amazon Cognito user pools to accessing an IAM Cloud application developed by the company Which combination of actions should the Security Engineer take to solve this issue? (Select TWO.)

- A. Update the password length policy In the on-premises Active Directory configuration.
- B. Update the password length policy In the IAM configuration.
- C. Enforce an IAM policy In Amazon Cognito and IAM IAM with a minimum password length condition.
- D. Update the password length policy in the Amazon Cognito configuration.
- E. Create an SCP with IAM Organizations that enforces a minimum password length for IAM IAM and Amazon Cognito.

**Answer:** AD

#### NEW QUESTION 6

- (Exam Topic 1)

A company is building a data lake on Amazon S3. The data consists of millions of small files containing sensitive information. The security team has the following requirements for the architecture:

- Data must be encrypted in transit.
- Data must be encrypted at rest.
- The bucket must be private, but if the bucket is accidentally made public, the data must remain confidential. Which combination of steps would meet the requirements? (Select THREE.)

- A. Enable AES-256 encryption using server-side encryption with Amazon S3-managed encryption keys (SSE-S3) on the S3 bucket
- B. Enable default encryption with server-side encryption with IAM KMS-managed keys (SSE-KMS) on the S3 bucket.
- C. Add a bucket policy that includes a deny if a PutObject request does not include IAMiSecureTcanspocet.
- D. Add a bucket policy with ws: Sourcelpto Allow uploads and downloads from the corporate intranet only.
- E. Add a bucket policy that includes a deny if a PutObject request does not include s3:x-amz-sairv9r-side-encyption: "IAM: kms".
- F. Enable Amazon Macie to monitor and act on changes to the data lake's S3 bucket.

**Answer:** BDF

#### NEW QUESTION 7

- (Exam Topic 1)

A company had one of its Amazon EC2 key pairs compromised. A Security Engineer must identify which current Linux EC2 instances were deployed and used the compromised key pair.

How can this task be accomplished?

- A. Obtain the list of instances by directly querying Amazon EC2 using: IAM ec2 describe-instances--fi1ters "Name=key-name,Values=KEYNAMEHERE".
- B. Obtain the fingerprint for the key pair from the IAM Management Console, then search for the fingerprint in the Amazon Inspector logs.
- C. Obtain the output from the EC2 instance metadata using: curl http://169.254.169.254/latest/meta-data/public-keys/0/.
- D. Obtain the fingerprint for the key pair from the IAM Management Console, then search for the fingerprint in Amazon CloudWatch Logs using: IAM logs filter-log-events.

**Answer:** A

#### NEW QUESTION 8

- (Exam Topic 1)

A Security Engineer discovered a vulnerability in an application running on Amazon ECS. The vulnerability allowed attackers to install malicious code. Analysis of the code shows it exfiltrates data on port 5353 in batches at random time intervals.

While the code of the containers is being patched, how can Engineers quickly identify all compromised hosts and stop the egress of data on port 5353?

- A. Enable IAM Shield Advanced and IAM WA
- B. Configure an IAM WAF custom filter for egress traffic on port 5353
- C. Enable Amazon Inspector on Amazon ECS and configure a custom assessment to evaluate containers that have port 5353 open
- D. Update the NACLs to block port 5353 outbound.
- E. Create an Amazon CloudWatch custom metric on the VPC Flow Logs identifying egress traffic on port 5353. Update the NACLs to block port 5353 outbound.
- F. Use Amazon Athena to query IAM CloudTrail logs in Amazon S3 and look for any traffic on port 5353. Update the security groups to block port 5353 outbound.

**Answer:** C

#### NEW QUESTION 9

- (Exam Topic 1)

A security engineer needs to configure monitoring and auditing for IAM Lambda.

Which combination of actions using IAM services should the security engineer take to accomplish this goal? (Select TWO.)

- A. Use IAM Config to track configuration changes to Lambda functions, runtime environments, tags, handler names, code sizes, memory allocation, timeout settings, and concurrency settings, along with Lambda IAM execution role, subnet, and security group associations.
- B. Use IAM CloudTrail to implement governance, compliance, operational, and risk auditing for Lambda.
- C. Use Amazon Inspector to automatically monitor for vulnerabilities and perform governance, compliance, operational, and risk auditing for Lambda.
- D. Use IAM Resource Access Manager to track configuration changes to Lambda functions, runtime environments, tags, handler names, code sizes, memory allocation, timeout settings, and concurrency settings, along with Lambda IAM execution role, subnet, and security group associations.
- E. Use Amazon Macie to discover, classify, and protect sensitive data being executed inside the Lambda function.

**Answer:** AB

#### NEW QUESTION 10

- (Exam Topic 1)

A company's development team is designing an application using IAM Lambda and Amazon Elastic Container Service (Amazon ECS). The development team needs to create IAM roles to support these systems. The company's security team wants to allow the developers to build IAM roles directly, but the security team wants to retain control over the permissions the developers can delegate to those roles. The development team needs access to more permissions than those required for the application's IAM services. The solution must minimize management overhead.

How should the security team prevent privilege escalation for both teams?

- A. Enable IAM CloudTrail
- B. Create a Lambda function that monitors the event history for privilege escalation events and notifies the security team.
- C. Create a managed IAM policy for the permissions require
- D. Reference the IAM policy as a permissions boundary within the development team's IAM role.
- E. Enable IAM Organizations Create an SCP that allows the IAM CreateUser action but that has a condition that prevents API calls other than those required by the development team
- F. Create an IAM policy with a deny on the IAMCreateUser action and assign the policy to the development team
- G. Use a ticket system to allow the developers to request new IAM roles for their application
- H. The IAM roles will then be created by the security team.

**Answer:** A

#### NEW QUESTION 10

- (Exam Topic 1)

Unapproved changes were previously made to a company's Amazon S3 bucket. A security engineer configured IAM Config to record configuration changes made to the company's S3 buckets. The engineer discovers there are S3 configuration changes being made, but no Amazon SNS notifications are being sent. The engineer has already checked the configuration of the SNS topic and has confirmed the configuration is valid.

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

- A. Configure the S3 bucket ACLs to allow IAM Config to record changes to the buckets.
- B. Configure policies attached to S3 buckets to allow IAM Config to record changes to the buckets.
- C. Attach the AmazonS3ReadOnlyAccess managed policy to the IAM user.
- D. Verify the security engineer's IAM user has an attached policy that allows all IAM Config actions.
- E. Assign the IAMConfigRole managed policy to the IAM Config role

**Answer:** BE

#### NEW QUESTION 12

- (Exam Topic 1)

A company recently performed an annual security assessment of its IAM environment. The assessment showed that audit logs are not available beyond 90 days and that unauthorized changes to IAM policies are made without detection.

How should a security engineer resolve these issues?

- A. Create an Amazon S3 lifecycle policy that archives IAM CloudTrail trail logs to Amazon S3 Glacier after 90 day
- B. Configure Amazon Inspector to provide a notification when a policy change is made to resources.
- C. Configure IAM Artifact to archive IAM CloudTrail logs Configure IAM Trusted Advisor to provide a notification when a policy change is made to resources.
- D. Configure Amazon CloudWatch to export log groups to Amazon S3. Configure IAM CloudTrail to provide a notification when a policy change is made to resources.
- E. Create an IAM CloudTrail trail that stores audit logs in Amazon S3. Configure an IAM Config rule to provide a notification when a policy change is made to resources.

**Answer:** D

#### Explanation:

<https://docs.IAM.amazon.com/IAMcloudtrail/latest/userguide/best-practices-security.html>

"For an ongoing record of events in your IAM account, you must create a trail. Although CloudTrail provides 90 days of event history information for management events in the CloudTrail console without creating a trail, it is not a permanent record, and it does not provide information about all possible types of events. For an ongoing record, and for a record that contains all the event types you specify, you must create a trail, which delivers log files to an Amazon S3 bucket that you specify."

<https://IAM.amazon.com/blogs/security/how-to-record-and-govern-your-iam-resource-configurations-using-IAM>

#### NEW QUESTION 13

- (Exam Topic 1)

After multiple compromises of its Amazon EC2 instances, a company's Security Officer is mandating that memory dumps of compromised instances be captured for further analysis. A Security Engineer just received an EC2 abuse notification report from IAM stating that an EC2 instance running the most recent Windows Server 2019 Base AMI is compromised.

How should the Security Engineer collect a memory dump of the EC2 instance for forensic analysis?

- A. Give consent to the IAM Security team to dump the memory core on the compromised instance and provide it to IAM Support for analysis.
- B. Review memory dump data that the IAM Systems Manager Agent sent to Amazon CloudWatch Logs.
- C. Download and run the EC2Rescue for Windows Server utility from IAM.
- D. Reboot the EC2 Windows Server, enter safe mode, and select memory dump.

**Answer:** C

#### Explanation:

<https://docs.IAM.amazon.com/IAMEC2/latest/WindowsGuide/ec2rw-cli.html>

#### NEW QUESTION 15

- (Exam Topic 1)

A company wants to encrypt the private network between its on-premises environment and IAM. The company also wants a consistent network experience for its

employees.

What should the company do to meet these requirements?

- A. Establish an IAM Direct Connect connection with IAM and set up a Direct Connect gateway
- B. In the Direct Connect gateway configuration, enable IPsec and BGP, and then leverage native IAM network encryption between Availability Zones and Regions,
- C. Establish an IAM Direct Connect connection with IAM and set up a Direct Connect gateway
- D. Using the Direct Connect gateway, create a private virtual interface and advertise the customer gateway private IP address
- E. Create a VPN connection using the customer gateway and the virtual private gateway
- F. Establish a VPN connection with the IAM virtual private cloud over the internet
- G. Establish an IAM Direct Connect connection with IAM and establish a public virtual interface
- H. For prefixes that need to be advertised, enter the customer gateway public IP address
- I. Create a VPN connection over Direct Connect using the customer gateway and the virtual private gateway.

**Answer: D**

#### NEW QUESTION 19

- (Exam Topic 1)

After a recent security audit involving Amazon S3, a company has asked assistance reviewing its S3 buckets to determine whether data is properly secured. The first S3 bucket on the list has the following bucket policy.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Principal": "*",
      "Action": "s3:*",
      "Resource": "arn:aws:s3:::examplebucket/*",
      "Condition": {
        "IpAddress": {
          "aws:SourceIp": [
            "10.10.10.0/24"
          ]
        }
      }
    }
  ]
}
```

Is this bucket policy sufficient to ensure that the data is not publicly accessible?

- A. Yes, the bucket policy makes the whole bucket publicly accessible despite now the S3 bucket ACL or object ACLs are configured.
- B. Yes, none of the data in the bucket is publicly accessible, regardless of how the S3 bucket ACL and object ACLs are configured.
- C. No, the IAM user policy would need to be examined first to determine whether any data is publicly accessible.
- D. No, the S3 bucket ACL and object ACLs need to be examined first to determine whether any data is publicly accessible.

**Answer: A**

#### NEW QUESTION 20

- (Exam Topic 1)

A global company must mitigate and respond to DDoS attacks at Layers 3, 4 and 7 All of the company's IAM applications are serverless with static content hosted on Amazon S3 using Amazon CloudFront and Amazon Route 53

Which solution will meet these requirements?

- A. Use IAM WAF with an upgrade to the IAM Business support plan
- B. Use IAM Certificate Manager with an Application Load Balancer configured with an origin access identity
- C. Use IAM Shield Advanced
- D. Use IAM WAF to protect IAM Lambda functions encrypted with IAM KMS and a NACL restricting all Ingress traffic

**Answer: C**

#### NEW QUESTION 24

- (Exam Topic 1)

A Security Engineer is looking for a way to control access to data that is being encrypted under a CMK. The Engineer is also looking to use additional authenticated data (AAD) to prevent tampering with ciphertext.

Which action would provide the required functionality?

- A. Pass the key alias to IAM KMS when calling Encrypt and Decrypt API actions.
- B. Use IAM policies to restrict access to Encrypt and Decrypt API actions.
- C. Use kms:EncryptionContext as a condition when defining IAM policies for the CMK.
- D. Use key policies to restrict access to the appropriate IAM groups.

**Answer: C**

#### Explanation:

<https://IAM.amazon.com/blogs/security/how-to-protect-the-integrity-of-your-encrypted-data-by-using-IAM-key> One of the most important and critical concepts in IAM Key Management Service (KMS) for advanced and secure data usage is EncryptionContext. Using EncryptionContext properly can help significantly improve the security of your applications. EncryptionContext is a key-value map (both strings) that is provided to KMS with each encryption and decryption request. EncryptionContext provides three benefits: Additional authenticated data (AAD), Audit trail, Authorization context

#### NEW QUESTION 26

- (Exam Topic 1)

A company uses Microsoft Active Directory for access management for on-premises resources and wants to use the same mechanism for accessing its IAM

accounts. Additionally, the development team plans to launch a public-facing application for which they need a separate authentication solution. When combination of the following would satisfy these requirements? (Select TWO)

- A. Set up domain controllers on Amazon EC2 to extend the on-premises directory to IAM
- B. Establish network connectivity between on-premises and the user's VPC
- C. Use Amazon Cognito user pools for application authentication
- D. Use AD Connector for application authentication.
- E. Set up federated sign-in to IAM through ADFS and SAML.

**Answer: CD**

#### NEW QUESTION 31

- (Exam Topic 1)

A security engineer needs to ensure their company's uses of IAM meets IAM security best practices. As part of this, the IAM account root user must not be used for daily work. The root user must be monitored for use, and the Security team must be alerted as quickly as possible if the root user is used. Which solution meets these requirements?

- A. Set up an Amazon CloudWatch Events rule that triggers an Amazon SNS notification.
- B. Set up an Amazon CloudWatch Events rule that triggers an Amazon SNS notification logs from S3 and generate notifications using Amazon SNS.
- C. Set up a rule in IAM config to trigger root user event
- D. Trigger an IAM Lambda function and generate notifications using Amazon SNS.
- E. Use Amazon Inspector to monitor the usage of the root user and generate notifications using Amazon SNS

**Answer: A**

#### NEW QUESTION 34

- (Exam Topic 1)

A security engineer must develop an encryption tool for a company. The company requires a cryptographic solution that supports the ability to perform cryptographic erasure on all resources protected by the key material in 15 minutes or less

Which IAM Key Management Service (IAM KMS) key solution will allow the security engineer to meet these requirements?

- A. Use Imported key material with CMK
- B. Use an IAM KMS CMK
- C. Use an IAM managed CMK.
- D. Use an IAM KMS customer managed CMK

**Answer: C**

#### NEW QUESTION 36

- (Exam Topic 1)

A company is collecting IAM CloudTrail log data from multiple IAM accounts by managing individual trails in each account and forwarding log data to a centralized Amazon S3 bucket residing in a log archive account. After CloudTrail introduced support for IAM Organizations trails, the company decided to further centralize management and automate deployment of the CloudTrail logging capability across all of its IAM accounts.

The company's security engineer created an IAM Organizations trail in the master account, enabled server-side encryption with IAM KMS managed keys (SSE-KMS) for the log files, and specified the same bucket as the storage location. However, the engineer noticed that logs recorded by the new trail were not delivered to the bucket.

Which factors could cause this issue? (Select TWO.)

- A. The CMK key policy does not allow CloudTrail to make encrypt and decrypt API calls against the key.
- B. The CMK key policy does not allow CloudTrail to make GenerateDataKey API calls against the key.
- C. The IAM role used by the CloudTrail trail does not have permissions to make PutObject API calls against a folder created for the Organizations trail.
- D. The S3 bucket policy does not allow CloudTrail to make PutObject API calls against a folder created for the Organizations trail.
- E. The CMK key policy does not allow the IAM role used by the CloudTrail trail to use the key for cryptographic operations.

**Answer: AD**

#### NEW QUESTION 38

- (Exam Topic 1)

An organization policy states that all encryption keys must be automatically rotated every 12 months. Which IAM Key Management Service (KMS) key type should be used to meet this requirement?

- A. IAM managed Customer Master Key (CMK)
- B. Customer managed CMK with IAM generated key material
- C. Customer managed CMK with imported key material
- D. IAM managed data key

**Answer: B**

#### NEW QUESTION 43

- (Exam Topic 1)

A company has several critical applications running on a large fleet of Amazon EC2 instances. As part of a security operations review, the company needs to apply a critical operating system patch to EC2 instances within 24 hours of the patch becoming available from the operating system vendor. The company does not have a patching solution deployed on IAM, but does have IAM Systems Manager configured. The solution must also minimize administrative overhead.

What should a security engineer recommend to meet these requirements?

- A. Create an IAM Config rule defining the patch as a required configuration for EC2 instances.
- B. Use the IAM Systems Manager Run Command to patch affected instances.
- C. Use an IAM Systems Manager Patch Manager predefined baseline to patch affected instances.

D. Use IAM Systems Manager Session Manager to log in to each affected instance and apply the patch.

**Answer: B**

**NEW QUESTION 46**

- (Exam Topic 1)

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. 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.
- B. Update the existing bucket policy in the Amazon S3 console to allow the security engineers principal to perform PutBucketPolicy, 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 engineers principal to perform GetBucketPolicy, 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 engineers principal to perform GetBucketPolicy, and then update the log file prefix in the CloudTrail console.

**Answer: C**

**Explanation:**

<https://docs.IAM.amazonaws.com/IAMcloudtrail/latest/userguide/create-s3-bucket-policy-for-cloudtrail.html#cloud>

**NEW QUESTION 50**

- (Exam Topic 1)

An company is using IAM Secrets Manager to store secrets that are encrypted using a CMK and are stored in the security account 111122223333. One of the company's production accounts, 444455556666, must be able to retrieve the secret values from the security account 111122223333. A security engineer needs to apply a policy to the secret in the security account based on least privilege access so the production account can retrieve the secret value only.  
 Which policy should the security engineer apply?

```
A. {
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "secretsmanager:*",
      "Principal": {"AWS": "444455556666"},
      "Resource": "*"
    }
  ]
}
```

```
B. {
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "secretsmanager:*",
      "Principal": {"AWS": "111122223333"},
      "Resource": "*"
    }
  ]
}
```

```
C. {
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "secretsmanager:GetSecretValue",
      "Principal": {"AWS": "111122223333"},
      "Resource": "*"
    }
  ]
}
```

```
D. {
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "secretsmanager:GetSecretValue",
      "Principal": {"AWS": "444455556666"},
      "Resource": "*"
    }
  ]
}
```

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

**Answer:** A

**NEW QUESTION 51**

- (Exam Topic 1)

Users report intermittent availability of a web application hosted on IAM. Monitoring systems report an excess of abnormal network traffic followed by high CPU utilization on the application web tier. Which of the following techniques will improve the availability of the application? (Select TWO.)

- A. Deploy IAM WAF to block all unsecured web applications from accessing the internet.
- B. Deploy an Intrusion Detection/Prevention System (IDS/IPS) to monitor or block unusual incoming network traffic.
- C. Configure security groups to allow outgoing network traffic only from hosts that are protected with up-to-date antivirus software.
- D. Create Amazon CloudFront distribution and configure IAM WAF rules to protect the web applications from malicious traffic.
- E. Use the default Amazon VPC for external-facing systems to allow IAM to actively block malicious network traffic affecting Amazon EC2 instances.

**Answer:** BD

**NEW QUESTION 54**

- (Exam Topic 1)

A company has decided to migrate sensitive documents from on-premises data centers to Amazon S3. Currently, the hard drives are encrypted to meet a compliance requirement regarding data encryption. The CISO wants to improve security by encrypting each file using a different key instead of a single key. Using a different key would limit the security impact of a single exposed key.

Which of the following requires the LEAST amount of configuration when implementing this approach?

- A. Place each file into a different S3 bucket
- B. Set the default encryption of each bucket to use a different IAM KMS customer managed key.
- C. Put all the files in the same S3 bucket
- D. Using S3 events as a trigger, write an IAM Lambda function to encrypt each file as it is added using different IAM KMS data keys.
- E. Use the S3 encryption client to encrypt each file individually using S3-generated data keys
- F. Place all the files in the same S3 bucket
- G. Use server-side encryption with IAM KMS-managed keys (SSE-KMS) to encrypt the data

**Answer:** D

**Explanation:**

References:

<https://docs.IAM.amazon.com/AmazonS3/latest/dev/serv-side-encryption.html>

Server-Side Encryption with Amazon S3-Managed Keys (SSE-S3) When you use Server-Side Encryption with Amazon S3-Managed Keys (SSE-S3), each object is encrypted with a unique key. Server-Side Encryption with Customer Master Keys (CMKs) Stored in IAM Key Management Service (SSE-KMS) is similar to SSE-S3, but with some additional benefits and charges for using this service.

When you use SSE-KMS to protect your data without an S3 Bucket Key, Amazon S3 uses an individual IAM KMS data key for every object. It makes a call to IAM KMS every time a request is made against a

KMS-encrypted object. <https://docs.IAM.amazon.com/AmazonS3/latest/dev/bucket-key.html>

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

**NEW QUESTION 59**

- (Exam Topic 1)

A Security Engineer is setting up an IAM CloudTrail trail for all regions in an IAM account. For added security, the logs are stored using server-side encryption with IAM KMS-managed keys (SSE-KMS) and have log integrity validation enabled.

While testing the solution, the Security Engineer discovers that the digest files are readable, but the log files are not. What is the MOST likely cause?

- A. The log files fail integrity validation and automatically are marked as unavailable.
- B. The KMS key policy does not grant the Security Engineer's IAM user or role permissions to decrypt with it.
- C. The bucket is set up to use server-side encryption with Amazon S3-managed keys (SSE-S3) as the default and does not allow SSE-KMS-encrypted files.
- D. An IAM policy applicable to the Security Engineer's IAM user or role denies access to the "CloudTrail/" prefix in the Amazon S3 bucket

**Answer:** B

**Explanation:**

Enabling server-side encryption encrypts the log files but not the digest files with SSE-KMS. Digest files are encrypted with Amazon S3-managed encryption keys (SSE-S3). <https://docs.IAM.amazon.com/IAMcloudtrail/latest/userguide/encrypting-cloudtrail-log-files-with-IAM-kms.htm>

**NEW QUESTION 63**

- (Exam Topic 1)

A company uses SAML federation with IAM Identity and Access Management (IAM) to provide internal users with SSO for their IAM accounts. The company's identity provider certificate was rotated as part of its normal lifecycle. Shortly after, users started receiving the following error when attempting to log in:

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

A security engineer needs to address the immediate issue and ensure that it will not occur again. Which combination of steps should the security engineer take to accomplish this? (Select TWO.)

- A. Download a new copy of the SAML metadata file from the identity provider Create a new IAM identity provider entity
- B. Upload the new metadata file to the new IAM identity provider entity.
- C. During the next certificate rotation period and before the current certificate expires, add a new certificate as the secondary to the identity provider
- D. Generate a new metadata file and upload it to the IAM identity provider entity
- E. Perform automated or manual rotation of the certificate when required.
- F. Download a new copy of the SAML metadata file from the identity provider Upload the new metadata to the IAM identity provider entity configured for the SAML integration in question.
- G. During the next certificate rotation period and before the current certificate expires, add a new certificate as the secondary to the identity provider
- H. Generate a new copy of the metadata file and create a new IAM identity provider entity
- I. Upload the metadata file to the new IAM identity provider entity
- J. Perform automated or manual rotation of the certificate when required.

- K. Download a new copy of the SAML metadata file from the identity provider
- L. Upload the new metadata file to the new IAM identity provider entity
- M. Update the identity provider configurations to pass a new IAM identity provider entity name in the SAML assertion.

**Answer:** AD

#### NEW QUESTION 67

- (Exam Topic 1)

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 69

- (Exam Topic 1)

Authorized Administrators are unable to connect to an Amazon EC2 Linux bastion host using SSH over the internet. The connection either fails to respond or generates the following error message:

Network error: Connection timed out.

What could be responsible for the connection failure? (Select THREE )

- A. The NAT gateway in the subnet where the EC2 instance is deployed has been misconfigured
- B. The internet gateway of the VPC has been reconfigured
- C. The security group denies outbound traffic on ephemeral ports
- D. The route table is missing a route to the internet gateway
- E. The NACL denies outbound traffic on ephemeral ports
- F. The host-based firewall is denying SSH traffic

**Answer:** BDF

#### NEW QUESTION 70

- (Exam Topic 1)

A company's Director of Information Security wants a daily email report from IAM that contains recommendations for each company account to meet IAM Security best practices.

Which solution would meet these requirements?

- A. In every IAM account, configure IAM Lambda to query the IAM Support API for IAM Trusted Advisor security checks. Send the results from Lambda to an Amazon SNS topic to send reports.
- B. Configure Amazon GuardDuty in a master account and invite all other accounts to be managed by the master account. Use GuardDuty's integration with Amazon SNS to report on findings.
- C. Use Amazon Athena and Amazon QuickSight to build reports off of IAM CloudTrail. Create a daily Amazon CloudWatch trigger to run the report daily and email it using Amazon SNS.
- D. Use IAM Artifact's prebuilt reports and subscriptions. Subscribe the Director of Information Security to the reports by adding the Director as the security alternate contact for each account.

**Answer:** A

#### NEW QUESTION 74

- (Exam Topic 1)

A Security Administrator at a university is configuring a fleet of Amazon EC2 instances. The EC2 instances are shared among students, and non-root SSH access is allowed. The Administrator is concerned about students attacking other IAM account resources by using the EC2 instance metadata service.

What can the Administrator do to protect against this potential attack?

- A. Disable the EC2 instance metadata service.
- B. Log all student SSH interactive session activity.
- C. Implement IP table-based restrictions on the instances.
- D. Install the Amazon Inspector agent on the instances.

**Answer:** A

#### Explanation:

"To turn off access to instance metadata on an existing instance...." <https://docs.IAM.amazon.com/IAMEC2/latest/UserGuide/configuring-instance-metadata-service.html> You can disable the service for existing (running or stopped) EC2 instances. <https://docs.IAM.amazon.com/cli/latest/reference/ec2/modify-instance-metadata-options.html>

#### NEW QUESTION 76

- (Exam Topic 1)

A company's web application is hosted on Amazon EC2 instances running behind an Application Load Balancer (ALB) in an Auto Scaling group. An IAM WAF web ACL is associated with the ALB. IAM CloudTrail is enabled, and stores logs in Amazon S3 and Amazon CloudWatch Logs.

The operations team has observed some EC2 instances reboot at random. After rebooting, all access logs on the instances have been deleted. During an

investigation, the operations team found that each reboot happened just after a PHP error occurred on the new-user-creation.php file. The operations team needs to view log information to determine if the company is being attacked. Which set of actions will identify the suspect attacker's IP address for future occurrences?

- A. Configure VPC Flow Logs on the subnet where the ALB is located, and stream the data CloudWatch. Search for the new-user-creation.php occurrences in CloudWatch.
- B. Configure the CloudWatch agent on the ALB Configure the agent to send application logs to CloudWatch Update the instance role to allow CloudWatch Logs access
- C. Export the logs to CloudWatch Search for the new-user-creation.php occurrences in CloudWatch.
- D. Configure the ALB to export access logs to an Amazon Elasticsearch Service cluster, and use the service to search for the new-user-creation.php occurrences.
- E. Configure the web ACL to send logs to Amazon Kinesis Data Firehose, which delivers the logs to an S3 bucket Use Amazon Athena to query the logs and find the new-user-creation php occurrences.

**Answer: D**

**Explanation:**

You send logs from your web ACL to an Amazon Kinesis Data Firehose with a configured storage destination. After you enable logging, IAM WAF delivers logs to your storage destination through the HTTPS endpoint of Kinesis Data Firehose. <https://docs.IAM.amazon.com/waf/latest/developerguide/logging.html>

**NEW QUESTION 78**

- (Exam Topic 1)

A company's information security team want to do near-real-time anomaly detection on Amazon EC2 performance and usage statistics. Log aggregation is the responsibility of a security engineer. To do the study, the Engineer needs gather logs from all of the company's IAM accounts in a single place. How should the Security Engineer go about doing this?

- A. Log in to each account four times a day and filter the IAM CloudTrail log data, then copy and paste the logs in to the Amazon S3 bucket in the destination account.
- B. Set up Amazon CloudWatch to stream data to an Amazon S3 bucket in each source account
- C. Set up bucket replication for each source account into a centralized bucket owned by the Security Engineer.
- D. Set up an IAM Config aggregator to collect IAM configuration data from multiple sources.
- E. Set up Amazon CloudWatch cross-account log data sharing with subscriptions in each account
- F. Send the logs to Amazon Kinesis Data Firehose in the Security Engineer's account.

**Answer: D**

**Explanation:**

Read the prerequisites in the question carefully. The solution must support "near real time" analysis of the log data. Cloudwatch doesn't stream logs to S3; it supports exporting them to S3 with an up to 12 hour expected delay:

<https://docs.IAM.amazon.com/AmazonCloudWatch/latest/logs/S3Export.html>

"Log data can take up to 12 hours to become available for export. For near real-time analysis of log data, see Analyzing log data with CloudWatch Logs Insights or Real-time processing of log data with subscriptions instead."

<https://docs.IAM.amazon.com/AmazonCloudWatch/latest/logs/Subscriptions.html>

"You can use subscriptions to get access to a real-time feed of log events from CloudWatch Logs and have it delivered to other services such as an Amazon Kinesis stream, an Amazon Kinesis Data Firehose stream, or IAM Lambda for custom processing, analysis, or loading to other systems. When log events are sent to the receiving service, they are Base64 encoded and compressed with the gzip format."

<https://docs.IAM.amazon.com/AmazonCloudWatch/latest/logs/CrossAccountSubscriptions.html>

**NEW QUESTION 79**

- (Exam Topic 1)

A company has hundreds of IAM accounts, and a centralized Amazon S3 bucket used to collect IAM CloudTrail for all of these accounts. A security engineer wants to create a solution that will enable the company to run ad hoc queries against its CloudTrail logs dating back 3 years from when the trails were first enabled in the company's IAM account.

How should the company accomplish this with the least amount of administrative overhead?

- A. Run an Amazon EMR cluster that uses a MapReduce job to be examine the CloudTrail trails.
- B. Use the events history/feature of the CloudTrail console to query the CloudTrail trails.
- C. Write an IAM Lambda function to query the CloudTrail trails Configure the Lambda function to be executed whenever a new file is created in the CloudTrail S3 bucket.
- D. Create an Amazon Athena table that tools at the S3 bucket the CloudTrail trails are being written to Use Athena to run queries against the trails.

**Answer: D**

**NEW QUESTION 84**

- (Exam Topic 1)

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

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

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

**Answer: A**

**Explanation:**

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

- Authenticate users through social IdPs, such as Amazon, Facebook, or Google, through the user pools supported by Amazon Cognito.
- Authenticate users through corporate identities, using SAML, LDAP, or Microsoft AD, through the user pools supported by Amazon Cognito.

**NEW QUESTION 85**

- (Exam Topic 1)

A security engineer has noticed an unusually high amount of traffic coming from a single IP address. This was discovered by analyzing the Application Load Balancer's access logs. How can the security engineer limit the number of requests from a specific IP address without blocking the IP address?

- A. Add a rule to the Application Load Balancer to route the traffic originating from the IP address in question and show a static webpage.
- B. Implement a rate-based rule with IAM WAF
- C. Use IAM Shield to limit the originating traffic hit rate.
- D. Implement the GeoLocation feature in Amazon Route 53.

**Answer: C**

**NEW QUESTION 86**

- (Exam Topic 1)

A convos data lake uses Amazon S3 and Amazon Athena. The company's security engineer has been asked to design an encryption solution that meets the company's data protection requirements. The encryption solution must work with Amazon S3 and keys managed by the company. The encryption solution must be protected in a hardware security module that is validated id Federal information Processing Standards (FPS) 140-2 Level 3.

Which solution meets these requirements?

- A. Use client-side encryption with an IAM KMS customer-managed key implemented with the IAM Encryption SDK
- B. Use IAM CloudHSM to store the keys and perform cryptographic operations Save the encrypted text in Amazon S3
- C. Use an IAM KMS customer-managed key that is backed by a custom key store using IAM CloudHSM
- D. Use an IAM KMS customer-managed key with the bring your own key (BYOK) feature to import a key stored in IAM CloudHSM

**Answer: B**

**NEW QUESTION 87**

- (Exam Topic 1)

A company has an IAM account and allows a third-party contractor who uses another IAM account, to assume certain IAM roles. The company wants to ensure that IAM roles can be assumed by the contractor only if the contractor has multi-factor authentication enabled on their IAM user accounts. What should the company do to accomplish this?

A)

Add the following condition to the IAM policy attached to all IAM roles.

```
"Effect" : "Deny",  
"Condition" : { "BoolIfExists" : { "aws:MultiFactorAuthPresent" : false } }
```

B)

Add the following condition to the IAM policy attached to all IAM roles:

```
"Effect" : "Deny",  
"Condition" : { "Bool" : { "aws:MultiFactorAuthPresent" : false } }
```

C)

Add the following condition to the IAM policy attached to all IAM roles.

```
"Effect" : "Allow",  
"Condition" : { "Null" : { "aws:MultiFactorAuthPresent" : false } }
```

D)

Add the following condition to the IAM policy attached to all IAM roles

```
"Effect" : "Allow",  
"Condition" : { "BoolIfExists" : { "aws:MultiFactorAuthPresent" : false } }
```

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

**Answer: A**

**NEW QUESTION 90**

- (Exam Topic 1)

A Developer signed in to a new account within an IAM Organizations organizations unit (OU) containing multiple accounts. Access to the Amazon S3 service is restricted with the following SCP:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Deny",
      "Action": "s3:*",
      "Resource": "*"
    }
  ]
}
```

How can the Security Engineer provide the Developer with Amazon S3 access without affecting other accounts?

- A. Move the SCP to the root OU of Organizations to remove the restriction to access Amazon S3.
- B. Add an IAM policy for the Developer, which grants S3 access.
- C. Create a new OU without applying the SCP restricting S3 access.
- D. Move the Developer account to this new OU.
- E. Add an allow list for the Developer account for the S3 service.

**Answer: C**

**NEW QUESTION 95**

- (Exam Topic 1)

A company has an encrypted Amazon S3 bucket. An Application Developer has an IAM policy that allows access to the S3 bucket, but the Application Developer is unable to access objects within the bucket.

What is a possible cause of the issue?

- A. The S3 ACL for the S3 bucket fails to explicitly grant access to the Application Developer
- B. The IAM KMS key for the S3 bucket fails to list the Application Developer as an administrator
- C. The S3 bucket policy fails to explicitly grant access to the Application Developer
- D. The S3 bucket policy explicitly denies access to the Application Developer

**Answer: C**

**NEW QUESTION 96**

- (Exam Topic 1)

A Security Engineer manages IAM Organizations for a company. The Engineer would like to restrict IAM usage to allow Amazon S3 only in one of the organizational units (OUs). The Engineer adds the following SCP to the OU:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "AllowsS3",
      "Effect": "Allow",
      "Action": "s3:*",
      "Resource": "*"
    }
  ]
}
```

The next day, API calls to IAM appear in IAM CloudTrail logs in an account under that OU. How should the Security Engineer resolve this issue?

- A. Move the account to a new OU and deny IAM:\* permissions.
- B. Add a Deny policy for all non-S3 services at the account level.
- C. Change the policy to: {"Version": "2012-10-17", "Statement": [{"Sid": "AllowsS3", "Effect": "Allow", "Action": "s3:\*", "Resource": "\*/\*"}]}
- D. Detach the default FullIAMAccess SCP

**Answer: D**

**Explanation:**

[https://docs.IAM.amazon.com/organizations/latest/APIReference/API\\_DetachPolicy.html](https://docs.IAM.amazon.com/organizations/latest/APIReference/API_DetachPolicy.html)

Every root, OU, and account must have at least one SCP attached. If you want to replace the default FullIAMAccess policy with an SCP that limits the permissions that can be delegated, you must attach the replacement SCP before you can remove the default SCP. This is the authorization strategy of an "allow list". If you instead attach a second SCP and leave the FullIAMAccess SCP still attached, and specify "Effect": "Deny" in the second SCP to override the "Effect": "Allow" in the FullIAMAccess policy (or any other attached SCP), you're using the authorization strategy of a "deny list".

**NEW QUESTION 98**

- (Exam Topic 1)

A company hosts its public website on Amazon EC2 instances behind an Application Load Balancer (ALB). The instances are in an EC2 Auto Scaling group across multiple Availability Zones. The website is under a DDoS attack by a specific IoT device brand that is visible in the user agent. A security engineer needs to mitigate the attack without impacting the availability of the public website.

What should the security engineer do to accomplish this?

- A. Configure a web ACL rule for IAM WAF to block requests with a string match condition for the user agent of the IoT device
- B. Associate the v/eb ACL with the ALB.
- C. Configure an Amazon CloudFront distribution to use the ALB as an origin
- D. Configure a web ACL rule for IAM WAF to block requests with a string match condition for the user agent of the IoT device

- E. Associate the web ACL with the ALB Change the public DNS entry of the website to point to the CloudFront distribution.
- F. Configure an Amazon CloudFront distribution to use a new ALB as an origin
- G. Configure a web ACL rule for IAM WAF to block requests with a string match condition for the user agent of the IoT device
- H. Change the ALB security group to allow access from CloudFront IP address ranges only Change the public DNS entry of the website to point to the CloudFront distribution.
- I. Activate IAM Shield Advanced to enable DDoS protection
- J. Apply an IAM WAF ACL to the ALB
- K. and configure a listener rule on the ALB to block IoT devices based on the user agent.

**Answer: D**

#### NEW QUESTION 99

- (Exam Topic 1)

A company is operating an open-source software platform that is internet facing. The legacy software platform no longer receives security updates. The software platform operates using Amazon Route 53 weighted load balancing to send traffic to two Amazon EC2 instances that connect to an Amazon RDS cluster. A recent report suggests this software platform is vulnerable to SQL injection attacks, with samples of attacks provided. The company's security engineer must secure this system against SQL injection attacks within 24 hours. The secure, engineer's solution involve the least amount of effort and maintain normal operations during implementation.

What should the security engineer do to meet these requirements?

- A. Create an Application Load Balancer with the existing EC2 instances as a target group Create an IAM WAF web ACL containing rules that protect the application from this attack
- B. then apply it to the ALB Test to ensure the vulnerability has been mitigated, then redirect the Route 53 records to point to the ALB Update security groups on the EC2 instances to prevent direct access from the internet
- C. Create an Amazon CloudFront distribution specifying one EC2 instance as an origin Create an IAM WAF web ACL containing rules that protect the application from this attack, then apply it to the distribution Test to ensure the vulnerability has been mitigated, then redirect the Route 53 records to point to CloudFront
- D. Obtain the latest source code for the platform and make the necessary updates Test the updated code to ensure that the vulnerability has been mitigated, then deploy the patched version of the platform to the EC2 instances
- E. Update the security group that is attached to the EC2 instances, removing access from the internet to the TCP port used by the SQL database Create an IAM WAF web ACL containing rules that protect the application from this attack, then apply it to the EC2 instances Test to ensure the vulnerability has been mitigated
- F. then restore the security group to the original setting

**Answer: A**

#### NEW QUESTION 104

- (Exam Topic 1)

An employee accidentally exposed an IAM access key and secret access key during a public presentation. The company Security Engineer immediately disabled the key.

How can the Engineer assess the impact of the key exposure and ensure that the credentials were not misused? (Choose two.)

- A. Analyze IAM CloudTrail for activity.
- B. Analyze Amazon CloudWatch Logs for activity.
- C. Download and analyze the IAM Use report from IAM Trusted Advisor.
- D. Analyze the resource inventory in IAM Config for IAM user activity.
- E. Download and analyze a credential report from IAM.

**Answer: AD**

#### Explanation:

[https://docs.IAM.amazon.com/IAM/latest/UserGuide/id\\_credentials\\_getting-report.html](https://docs.IAM.amazon.com/IAM/latest/UserGuide/id_credentials_getting-report.html)

#### NEW QUESTION 107

- (Exam Topic 1)

A company's security information events management (SIEM) tool receives new IAM CloudTrail logs from an Amazon S3 bucket that is configured to send all object created event notifications to an Amazon SNS topic. An Amazon SQS queue is subscribed to this SNS topic. The company's SIEM tool then ports this SQS queue for new messages using an IAM role and fetches new log events from the S3 bucket based on the SQS messages.

After a recent security review that resulted in restricted permissions, the SIEM tool has stopped receiving new CloudTrail logs.

Which of the following are possible causes of this issue? (Select THREE)

- A. The SQS queue does not allow the SQS SendMessage action from the SNS topic
- B. The SNS topic does not allow the SNS Publish action from Amazon S3
- C. The SNS topic is not delivering raw messages to the SQS queue
- D. The S3 bucket policy does not allow CloudTrail to perform the PutObject action
- E. The IAM role used by the SIEM tool does not have permission to subscribe to the SNS topic
- F. The IAM role used by the SIEM tool does not allow the SQS DeleteMessage action.

**Answer: ADF**

#### NEW QUESTION 109

- (Exam Topic 1)

Two Amazon EC2 instances in different subnets should be able to connect to each other but cannot. It has been confirmed that other hosts in the same subnets are able to communicate successfully, and that security groups have valid ALLOW rules in place to permit this traffic.

Which of the following troubleshooting steps should be performed?

- A. Check inbound and outbound security groups, looking for DENY rules.
- B. Check inbound and outbound Network ACL rules, looking for DENY rules.
- C. Review the rejected packet reason codes in the VPC Flow Logs.
- D. Use IAM X-Ray to trace the end-to-end application flow

Answer: C

**NEW QUESTION 113**

- (Exam Topic 1)

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 118**

- (Exam Topic 1)

An application developer is using an IAM Lambda function that must use IAM KMS to perform encrypt and decrypt operations for API keys that are less than 2 KB. Which key policy would allow the application to do this while granting least privilege?

- A. 

```
{
  "Sid": "AllowUseOfTheKey",
  "Effect": "Allow",
  "Principal": {"AWS": "arn:aws:iam::444455556666:role/EncryptionApp"},
  "Action": [
    "kms:*"
  ],
  "Resource": "*"
}
```
- B. 

```
{
  "Sid": "AllowUseOfTheKey",
  "Effect": "Allow",
  "Principal": {"AWS": "arn:aws:iam::444455556666:role/EncryptionApp"},
  "Action": [
    "kms:Encrypt",
    "kms:Decrypt"
  ],
  "Resource": "*"
}
```
- C. 

```
{
  "Sid": "AllowUseOfTheKey",
  "Effect": "Allow",
  "Principal": {"AWS": "arn:aws:iam::444455556666:role/EncryptionApp"},
  "Action": [
    "kms:DescribeKey",
    "kms:GenerateDataKey*",
    "kms:Encrypt",
    "kms:ReEncrypt*",
    "kms:Decrypt"
  ],
  "Resource": "*"
}
```
- D. 

```
{
  "Sid": "AllowUseOfTheKey",
  "Effect": "Allow",
  "Principal": {"AWS": "arn:aws:iam::444455556666:role/EncryptionApp"},
  "Action": [
    "kms:DescribeKey",
    "kms:GenerateDataKey*",
    "kms:Encrypt",
    "kms:ReEncrypt*",
    "kms:Disable*",
    "kms:Decrypt"
  ],
  "Resource": "*"
}
```

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

Answer: C

**NEW QUESTION 121**

- (Exam Topic 1)

A Security Engineer is setting up a new IAM account. The Engineer has been asked to continuously monitor the company's IAM account using automated compliance checks based on IAM best practices and Center for Internet Security (CIS) IAM Foundations Benchmarks. How can the Security Engineer accomplish this using IAM services?

- A. Enable IAM Config and set it to record all resources in all Regions and global resource
- B. Then enable IAM Security Hub and confirm that the CIS IAM Foundations compliance standard is enabled
- C. Enable Amazon Inspector and configure it to scan all Regions for the CIS IAM Foundations Benchmark
- D. Then enable IAM Security Hub and configure it to ingest the Amazon Inspector findings
- E. Enable Amazon Inspector and configure it to scan all Regions for the CIS IAM Foundations Benchmark
- F. Then enable IAM Shield in all Regions to protect the account from DDoS attacks.
- G. Enable IAM Config and set it to record all resources in all Regions and global resources. Then enable Amazon Inspector and configure it to enforce CIS IAM

Foundations Benchmarks using IAM Config rules.

**Answer:** A

**Explanation:**

<https://docs.IAM.amazon.com/securityhub/latest/userguide/securityhub-standards-cis-config-resources.html>

#### NEW QUESTION 122

- (Exam Topic 2)

Your IT Security department has mandated that all data on EBS volumes created for underlying EC2 Instances need to be encrypted. Which of the following can help achieve this?

Please select:

- A. IAM KMS API
- B. IAM Certificate Manager
- C. API Gateway with STS
- D. IAM Access Key

**Answer:** A

**Explanation:**

The IAM Documentation mentions the following on IAM KMS

IAM Key Management Service (IAM KMS) is a managed service that makes it easy for you to create and control the encryption keys used to encrypt your data. IAM KMS is integrated with other IAM services including Amazon Elastic Block Store (Amazon EBS), Amazon Simple Storage Service (Amazon S3), Amazon Redshift Amazon Elastic Transcoder, Amazon WorkMail, Amazon Relational Database Service (Amazon RDS), and others to make it simple to encrypt your data with encryption keys that you manage

Option B is incorrect - The IAM Certificate manager can be used to generate SSL certificates that can be used to encrypt traffic transit, but not at rest

Option C is incorrect is again used for issuing tokens when using API gateway for traffic in transit. Option D is used for secure access to EC2 Instances

For more information on IAM KMS, please visit the following URL: <https://docs.IAM.amazon.com/kms/latest/developereuide/overview.html> The correct answer is: IAM KMS API

Submit your Feedback/Queries to our Experts

#### NEW QUESTION 124

- (Exam Topic 2)

The Security Engineer created a new IAM Key Management Service (IAM KMS) key with the following key policy:

```
{
  "Effect": "Allow",
  "Principal": {"AWS": "arn:aws:iam::111122223333:root"},
  "Action": "kms:*";
  "Resource": "*"
}
```

What are the effects of the key policy? (Choose two.)

- A. The policy allows access for the IAM account 111122223333 to manage key access though IAM policies.
- B. The policy allows all IAM users in account 111122223333 to have full access to the KMS key.
- C. The policy allows the root user in account 111122223333 to have full access to the KMS key.
- D. The policy allows the KMS service-linked role in account 111122223333 to have full access to the KMS key.
- E. The policy allows all IAM roles in account 111122223333 to have full access to the KMS key.

**Answer:** AC

**Explanation:**

Giving the IAM account full access to the CMK does this; it enables you to use IAM policies to give IAM users and roles in the account access to the CMK. It does not by itself give any IAM users or roles access to the CMK, but it enables you to use IAM policies to do so.

<https://docs.IAM.amazon.com/kms/latest/developerguide/key-policies.html#key-policy-default-allow-root-enabl>

#### NEW QUESTION 129

- (Exam Topic 2)

The Security Engineer implemented a new vault lock policy for 10TB of data and called initiate-vault-lock 12 hours ago. The Audit team identified a typo that is allowing incorrect access to the vault.

What is the MOST cost-effective way to correct this?

- A. Call the abort-vault-lock operation, fix the typo, and call the initiate-vault-lock again.
- B. Copy the vault data to Amazon S3, delete the vault, and create a new vault with the data.
- C. Update the policy, keeping the vault lock in place.
- D. Update the policy and call initiate-vault-lock again to apply the new policy.

**Answer:** A

**Explanation:**

Initiate the lock by attaching a vault lock policy to your vault, which sets the lock to an in-progress state and returns a lock ID. While in the in-progress state, you have 24 hours to validate your vault lock policy before the lock ID expires. Use the lock ID to complete the lock process. If the vault lock policy doesn't work as expected, you can abort the lock and restart from the beginning. For information on how to use the S3 Glacier API to lock a vault, see Locking a Vault by Using the Amazon S3 Glacier API. <https://docs.IAM.amazon.com/amazonglacier/latest/dev/vault-lock-policy.html>

#### NEW QUESTION 131

- (Exam Topic 2)

You have a web site that is sitting behind IAM Cloudfront. You need to protect the web site against threats such as SQL injection and Cross site scripting attacks. Which of the following service can help in such a scenario Please select:

- A. IAM Trusted Advisor
- B. IAM WAF
- C. IAM Inspector
- D. IAM Config

**Answer: B**

**Explanation:**

The IAM Documentation mentions the following

IAM WAF is a web application firewall that helps detect and block malicious web requests targeted at your web applications. IAM WAF allows you to create rules that can help protect against common web exploits like SQL injection and cross-site scripting. With IAM WAF you first identify the resource (either an Amazon CloudFront distribution or an Application Load Balancer) that you need to protect.

Option A is invalid because this will only give advise on how you can better the security in your IAM account but not protect against threats mentioned in the question.

Option C is invalid because this can be used to scan EC2 Instances for vulnerabilities but not protect against threats mentioned in the question.

Option D is invalid because this can be used to check config changes but not protect against threats mentioned in the quest

For more information on IAM WAF, please visit the following URL: <https://IAM.amazon.com/waf/details>;

The correct answer is: IAM WAF

Submit your Feedback/Queries to our Experts

**NEW QUESTION 135**

- (Exam Topic 2)

An application running on EC2 instances must use a username and password to access a database. The developer has stored those secrets in the SSM Parameter Store with type SecureString using the default KMS CMK. Which combination of configuration steps will allow the application to access the secrets via the API? Select 2 answers from the options below

Please select:

- A. Add the EC2 instance role as a trusted service to the SSM service role.
- B. Add permission to use the KMS key to decrypt to the SSM service role.
- C. Add permission to read the SSM parameter to the EC2 instance rol
- D. .
- E. Add permission to use the KMS key to decrypt to the EC2 instance role
- F. Add the SSM service role as a trusted service to the EC2 instance role.

**Answer: CD**

**Explanation:**

The below example policy from the IAM Documentation is required to be given to the EC2 Instance in order to read a secure string from IAM KMS. Permissions need to be given to the Get Parameter API and the KMS API call to decrypt the secret.

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

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "ssm:GetParameter*"
      ],
      "Resource": "arn:aws:ssm:us-west-2:111122223333:parameter/ReadableParameters/*"
    },
    {
      "Effect": "Allow",
      "Action": [
        "kms:Decrypt"
      ],
      "Resource": "arn:aws:kms:us-west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab"
    }
  ]
}
```

Option A is invalid because roles can be attached to EC2 and not EC2 roles to SSM Option B is invalid because the KMS key does not need to decrypt the SSM service role.

Option E is invalid because this configuration is valid For more information on the parameter store, please visit the below URL:

<https://docs.IAM.amazon.com/kms/latest/developerguide/services-parameter-store.html>

The correct answers are: Add permission to read the SSM parameter to the EC2 instance role., Add permission to use the KMS key to decrypt to the EC2 instance role

Submit your Feedback/Queries to our Experts

**NEW QUESTION 138**

- (Exam Topic 2)

During a recent internal investigation, it was discovered that all API logging was disabled in a production account, and the root user had created new API keys that appear to have been used several times.

What could have been done to detect and automatically remediate the incident?

- A. Using Amazon Inspector, review all of the API calls and configure the inspector agent to leverage SNS topics to notify security of the change to IAM CloudTrail, and revoke the new API keys for the root user.
- B. Using IAM Config, create a config rule that detects when IAM CloudTrail is disabled, as well as any calls to the root user create-api-ke
- C. Then use a Lambda function to re-enable CloudTrail logs and deactivate the root API keys.
- D. Using Amazon CloudWatch, create a CloudWatch event that detects IAM CloudTrail deactivation and a separate Amazon Trusted Advisor check to automatically detect the creation of root API key
- E. Then use a Lambda function to enable IAM CloudTrail and deactivate the root API keys.
- F. Using Amazon CloudTrail, create a new CloudTrail event that detects the deactivation of CloudTrail logs, and a separate CloudTrail event that detects the creation of root API key
- G. Then use a Lambda function to enable CloudTrail and deactivate the root API keys.

**Answer: B**

**Explanation:**

<https://docs.IAM.amazon.com/config/latest/developerguide/cloudtrail-enabled.html> <https://docs.IAM.amazon.com/config/latest/developerguide/iam-root-access-key-check.html>

**NEW QUESTION 139**

- (Exam Topic 2)

You want to get a list of vulnerabilities for an EC2 Instance as per the guidelines set by the Center of Internet Security. How can you go about doing this? Please select:

- A. Enable IAM Guard Duty for the Instance
- B. Use IAM Trusted Advisor
- C. Use IAM inspector
- D. Use IAM Macie

**Answer: C**

**Explanation:**

The IAM Inspector service can inspect EC2 Instances based on specific Rules. One of the rules packages is based on the guidelines set by the Center of Internet Security

Center for Internet security (CIS) Benchmarks

The CIS Security Benchmarks program provides well-defined, un-biased and consensus-based industry best practices to help organizations assess and improve their security. Amazon Web Services is a CIS Security Benchmarks Member company and the list of Amazon Inspector certifications can be viewed here.

Option A is invalid because this can be used to protect an instance but not give the list of vulnerabilities Options B and D are invalid because these services cannot give a list of vulnerabilities For more information on the guidelines, please visit the below URL:

\* [https://docs.IAM.amazon.com/inspector/latest/userguide/inspector\\_cis.html](https://docs.IAM.amazon.com/inspector/latest/userguide/inspector_cis.html) The correct answer is: Use IAM Inspector

Submit your Feedback/Queries to our Experts

**NEW QUESTION 142**

- (Exam Topic 2)

Example.com hosts its internal document repository on Amazon EC2 instances. The application runs on EC2 instances and previously stored the documents on encrypted Amazon EBS volumes. To optimize the application for scale, example.com has moved the files to Amazon S3. The security team has mandated that all the files are securely deleted from the EBS volume, and it must certify that the data is unreadable before releasing the underlying disks.

Which of the following methods will ensure that the data is unreadable by anyone else?

- A. Change the volume encryption on the EBS volume to use a different encryption mechanism
- B. Then, release the EBS volumes back to IAM.
- C. Release the volumes back to IA
- D. IAM immediately wipes the disk after it is deprovisioned.
- E. Delete the encryption key used to encrypt the EBS volume
- F. Then, release the EBS volumes back to IAM.
- G. Delete the data by using the operating system delete command
- H. Run Quick Format on the drive and then release the EBS volumes back to IAM.

**Answer: D**

**Explanation:**

Amazon EBS volumes are presented to you as raw unformatted block devices that have been wiped prior to being made available for use. Wiping occurs immediately before reuse so that you can be assured that the wipe process completed. If you have procedures requiring that all data be wiped via a specific method, such as those detailed in NIST 800-88 ("Guidelines for Media Sanitization"), you have the ability to do so on Amazon EBS. You should conduct a specialized wipe procedure prior to deleting the volume for compliance with your established requirements.

<https://d0.IAMstatic.com/whitepapers/IAM-security-whitepaper.pdf>

**NEW QUESTION 143**

- (Exam Topic 2)

An organization has three applications running on IAM, each accessing the same data on Amazon S3. The data on Amazon S3 is server-side encrypted by using an IAM KMS Customer Master Key (CMK).

What is the recommended method to ensure that each application has its own programmatic access control permissions on the KMS CMK?

- A. Change the key policy permissions associated with the KMS CMK for each application when it must access the data in Amazon S3.
- B. Have each application assume an IAM role that provides permissions to use the IAM Certificate Manager CMK.
- C. Have each application use a grant on the KMS CMK to add or remove specific access controls on the KMS CMK.
- D. Have each application use an IAM policy in a user context to have specific access permissions on the KMS CMK.

**Answer:** C

**NEW QUESTION 148**

- (Exam Topic 2)

An organization operates a web application that serves users globally. The application runs on Amazon EC2 instances behind an Application Load Balancer. There is an Amazon CloudFront distribution in front of the load balancer, and the organization uses IAM WAF. The application is currently experiencing a volumetric attack whereby the attacker is exploiting a bug in a popular mobile game.

The application is being flooded with HTTP requests from all over the world with the User-Agent set to the following string: Mozilla/5.0 (compatible; ExampleCorp; ExampleGame/1.22; Mobile/1.0)

What mitigation can be applied to block attacks resulting from this bug while continuing to service legitimate requests?

- A. Create a rule in IAM WAF rules with conditions that block requests based on the presence of ExampleGame/1.22 in the User-Agent header
- B. Create a geographic restriction on the CloudFront distribution to prevent access to the application from most geographic regions
- C. Create a rate-based rule in IAM WAF to limit the total number of requests that the web application services.
- D. Create an IP-based blacklist in IAM WAF to block the IP addresses that are originating from requests that contain ExampleGame/1.22 in the User-Agent header.

**Answer:** A

**Explanation:**

Since all the attack has http header- User-Agent set to string: Mozilla/5.0 (compatible; ExampleCorp;) it would be much more easier to block these attack by simply denying traffic with the header match . HTH ExampleGame/1.22; Mobile/1.0)

**NEW QUESTION 149**

- (Exam Topic 2)

An organization wants to deploy a three-tier web application whereby the application servers run on Amazon EC2 instances. These EC2 instances need access to credentials that they will use to authenticate their SQL connections to an Amazon RDS DB instance. Also, IAM Lambda functions must issue queries to the RDS database by using the same database credentials.

The credentials must be stored so that the EC2 instances and the Lambda functions can access them. No other access is allowed. The access logs must record when the credentials were accessed and by whom.

What should the Security Engineer do to meet these requirements?

- A. Store the database credentials in IAM Key Management Service (IAM KMS). Create an IAM role with access to IAM KMS by using the EC2 and Lambda service principals in the role's trust polic
- B. Add the role to an EC2 instance profil
- C. Attach the instance profile to the EC2 instance
- D. Set up Lambda to use the new role for execution.
- E. Store the database credentials in IAM KM
- F. Create an IAM role with access to KMS by using the EC2 and Lambda service principals in the role's trust polic
- G. Add the role to an EC2 instance profil
- H. Attach the instance profile to the EC2 instances and the Lambda function.
- I. Store the database credentials in IAM Secrets Manage
- J. Create an IAM role with access to Secrets Manager by using the EC2 and Lambda service principals in the role's trust polic
- K. Add the role to an EC2 instance profil
- L. Attach the instance profile to the EC2 instances and the Lambda function.
- M. Store the database credentials in IAM Secrets Manage
- N. Create an IAM role with access to Secrets Manager by using the EC2 and Lambda service principals in the role's trust polic
- O. Add the role to an EC2 instance profil
- P. Attach the instance profile to the EC2 instance
- Q. Set up Lambda to use the new role for execution.

**Answer:** D

**NEW QUESTION 152**

- (Exam Topic 2)

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

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

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

**Answer:** BDE

**NEW QUESTION 157**

- (Exam Topic 2)

A Security Engineer must implement mutually authenticated TLS connections between containers that communicate inside a VPC.

Which solution would be MOST secure and easy to maintain?

- A. Use IAM Certificate Manager to generate certificates from a public certificate authority and deploy them to all the containers.
- B. Create a self-signed certificate in one container and use IAM Secrets Manager to distribute the certificate to the other containers to establish trust.
- C. Use IAM Certificate Manager Private Certificate Authority (ACM PCA) to create a subordinate certificate authority, then create the private keys in the containers and sign them using the ACM PCA API.
- D. Use IAM Certificate Manager Private Certificate Authority (ACM PCA) to create a subordinate certificate authority, then use IAM Certificate Manager to generate

the private certificates and deploy them to all the containers.

**Answer:** D

**NEW QUESTION 161**

- (Exam Topic 2)

A company hosts a popular web application that connects to an Amazon RDS MySQL DB instance running in a private VPC subnet that was created with default ACL settings. The IT Security department has a suspicion that a DDos attack is coming from a suspecting IP. How can you protect the subnets from this attack? Please select:

- A. Change the Inbound Security Groups to deny access from the suspecting IP
- B. Change the Outbound Security Groups to deny access from the suspecting IP
- C. Change the Inbound NACL to deny access from the suspecting IP
- D. Change the Outbound NACL to deny access from the suspecting IP

**Answer:** C

**Explanation:**

Option A and B are invalid because by default the Security Groups already block traffic. You can use NACL's as an additional security layer for the subnet to deny traffic.

Option D is invalid since just changing the Inbound Rules is sufficient The IAM Documentation mentions the following

A network access control list (ACL) is an optional layer of security for your VPC that acts as a firewall for controlling traffic in and out of one or more subnets. You might set up network ACLs with rules similar to your security groups in order to add an additional layer of security to your VPC.

The correct answer is: Change the Inbound NACL to deny access from the suspecting IP

**NEW QUESTION 162**

- (Exam Topic 2)

An application outputs logs to a text file. The logs must be continuously monitored for security incidents. Which design will meet the requirements with MINIMUM effort?

- A. Create a scheduled process to copy the component's logs into Amazon S3. Use S3 events to trigger a Lambda function that updates Amazon CloudWatch metrics with the log data
- B. Set up CloudWatch alerts based on the metrics.
- C. Install and configure the Amazon CloudWatch Logs agent on the application's EC2 instance
- D. Create a CloudWatch metric filter to monitor the application log
- E. Set up CloudWatch alerts based on the metrics.
- F. Create a scheduled process to copy the application log files to IAM CloudTrail
- G. Use S3 events to trigger Lambda functions that update CloudWatch metrics with the log data
- H. Set up CloudWatch alerts based on the metrics.
- I. Create a file watcher that copies data to Amazon Kinesis when the application writes to the log file. Have Kinesis trigger a Lambda function to update Amazon CloudWatch metrics with the log data
- J. Set up CloudWatch alerts based on the metrics.

**Answer:** B

**Explanation:**

<https://docs.IAM.amazonaws.com/AmazonCloudWatch/latest/logs/QuickStartEC2Instance.html>

**NEW QUESTION 166**

- (Exam Topic 2)

A company's security policy requires that VPC Flow Logs are enabled on all VPCs. A Security Engineer is looking to automate the process of auditing the VPC resources for compliance.

What combination of actions should the Engineer take? (Choose two.)

- A. Create an IAM Lambda function that determines whether Flow Logs are enabled for a given VPC.
- B. Create an IAM Config configuration item for each VPC in the company IAM account.
- C. Create an IAM Config managed rule with a resource type of IAM:: Lambda:: Function.
- D. Create an Amazon CloudWatch Event rule that triggers on events emitted by IAM Config.
- E. Create an IAM Config custom rule, and associate it with an IAM Lambda function that contains the evaluating logic.

**Answer:** AE

**Explanation:**

<https://medium.com/mudita-misra/how-to-audit-your-aws-resources-for-security-compliance-by-using-custom-l>

**NEW QUESTION 168**

- (Exam Topic 2)

Which of the following are valid event sources that are associated with web access control lists that trigger IAM WAF rules? (Choose two.)

- A. Amazon S3 static web hosting
- B. Amazon CloudFront distribution
- C. Application Load Balancer
- D. Amazon Route 53
- E. VPC Flow Logs

**Answer:** BC

**Explanation:**

A web access control list (web ACL) gives you fine-grained control over the web requests that your Amazon API Gateway API, Amazon CloudFront distribution or Application Load Balancer responds to.

#### NEW QUESTION 170

- (Exam Topic 2)

A company wants to have a secure way of generating, storing and managing cryptographic exclusive access for the keys. Which of the following can be used for this purpose?

Please select:

- A. Use KMS and the normal KMS encryption keys
- B. Use KMS and use an external key material
- C. Use S3 Server Side encryption
- D. Use Cloud HSM

**Answer:** D

#### Explanation:

The IAM Documentation mentions the following

The IAM CloudHSM service helps you meet corporate, contractual and regulatory compliance requirements for data security by using dedicated Hardware Security Module (HSM) instances within the IAM cloud. IAM and IAM Marketplace partners offer a variety of solutions for protecting sensitive data within the IAM platform, but for some applications and data subject to contractual or regulatory mandates for managing cryptographic keys, additional protection may be necessary. CloudHSM complements existing data protection solutions and allows you to protect your encryption keys within HSMs that are design and validated to government standards for secure key management. CloudHSM allows you to securely generate, store and manage cryptographic keys used for data encryption in a way that keys are accessible only by you.

Option A.B and Care invalid because in all of these cases, the management of the key will be with IAM. Here the question specifically mentions that you want to have exclusive access over the keys. This can be achieved with Cloud HSM

For more information on CloudHSM, please visit the following URL: <https://IAM.amazon.com/cloudhsm/faq>:

The correct answer is: Use Cloud HSM Submit your Feedback/Queries to our Experts

#### NEW QUESTION 171

- (Exam Topic 2)

Some highly sensitive analytics workloads are to be moved to Amazon EC2 hosts. Threat modeling has found that a risk exists where a subnet could be maliciously or accidentally exposed to the internet.

Which of the following mitigations should be recommended?

- A. Use IAM Config to detect whether an Internet Gateway is added and use an IAM Lambda function to provide auto-remediation.
- B. Within the Amazon VPC configuration, mark the VPC as private and disable Elastic IP addresses.
- C. Use IPv6 addressing exclusively on the EC2 hosts, as this prevents the hosts from being accessed from the internet.
- D. Move the workload to a Dedicated Host, as this provides additional network security controls and monitorin

**Answer:** A

#### Explanation:

By default, Private instance has a private IP address, but no public IP address. These instances can communicate with each other, but can't access the Internet. You can enable Internet access for an instance launched into a nondefault subnet by attaching an Internet gateway to its VPC (if its VPC is not a default VPC) and associating an Elastic IP address with the instance. Alternatively, to allow an instance in your VPC to initiate outbound connections to the Internet but prevent unsolicited inbound connections from the Internet, you can use a network address translation (NAT) instance. NAT maps multiple private IP addresses to a single public IP address. A NAT instance has an Elastic IP address and is connected to the Internet through an Internet gateway. You can connect an instance in a private subnet to the Internet through the NAT instance, which routes traffic from the instance to the Internet gateway, and routes any responses to the instance.

#### NEW QUESTION 172

- (Exam Topic 2)

The Security Engineer is given the following requirements for an application that is running on Amazon EC2 and managed by using IAM CloudFormation templates with EC2 Auto Scaling groups:

- Have the EC2 instances bootstrapped to connect to a backend database.
- Ensure that the database credentials are handled securely.
- Ensure that retrievals of database credentials are logged.

Which of the following is the MOST efficient way to meet these requirements?

- A. Pass databases credentials to EC2 by using CloudFormation stack parameters with the property set to tru
- B. Ensure that the instance is configured to log to Amazon CloudWatch Logs.
- C. Store database passwords in IAM Systems Manager Parameter Store by using SecureString parameters. Set the IAM role for the EC2 instance profile to allow access to the parameters.
- D. Create an IAM Lambda that ingests the database password and persists it to Amazon S3 with server-side encryptio
- E. Have the EC2 instances retrieve the S3 object on startup, and log all script invocations to syslog.
- F. Write a script that is passed in as UserData so that it is executed upon launch of the EC2 instance. Ensure that the instance is configured to log to Amazon CloudWatch Logs.

**Answer:** B

#### NEW QUESTION 176

- (Exam Topic 2)

Which option for the use of the IAM Key Management Service (KMS) supports key management best practices that focus on minimizing the potential scope of data exposed by a possible future key compromise?

- A. Use KMS automatic key rotation to replace the master key, and use this new master key for future encryption operations without re-encrypting previously encrypted data.

- B. Generate a new Customer Master Key (CMK), re-encrypt all existing data with the new CMK, and use it for all future encryption operations.
- C. Change the CMK alias every 90 days, and update key-calling applications with the new key alias.
- D. Change the CMK permissions to ensure that individuals who can provision keys are not the same individuals who can use the keys.

**Answer:** A

**Explanation:**

"automatic key rotation has no effect on the data that the CMK protects. It does not rotate the data keys that the CMK generated or re-encrypt any data protected by the CMK, and it will not mitigate the effect of a compromised data key. You might decide to create a new CMK and use it in place of the original CMK. This has the same effect as rotating the key material in an existing CMK, so it's often thought of as manually rotating the key."

<https://docs.aws.amazon.com/kms/latest/developerguide/rotate-keys.html>

<https://docs.IAM.amazon.com/kms/latest/developerguide/rotate-keys.html#rotate-keys-manually> for IAM standards

**NEW QUESTION 181**

- (Exam Topic 2)

A Security Administrator is performing a log analysis as a result of a suspected IAM account compromise. The Administrator wants to analyze suspicious IAM CloudTrail log files but is overwhelmed by the volume of audit logs being generated.

What approach enables the Administrator to search through the logs MOST efficiently?

- A. Implement a "write-only" CloudTrail event filter to detect any modifications to the IAM account resources.
- B. Configure Amazon Macie to classify and discover sensitive data in the Amazon S3 bucket that contains the CloudTrail audit logs.
- C. Configure Amazon Athena to read from the CloudTrail S3 bucket and query the logs to examine account activities.
- D. Enable Amazon S3 event notifications to trigger an IAM Lambda function that sends an email alarm when there are new CloudTrail API entries.

**Answer:** C

**NEW QUESTION 182**

- (Exam Topic 2)

The Information Technology department has stopped using Classic Load Balancers and switched to Application Load Balancers to save costs. After the switch, some users on older devices are no longer able to connect to the website.

What is causing this situation?

- A. Application Load Balancers do not support older web browsers.
- B. The Perfect Forward Secrecy settings are not configured correctly.
- C. The intermediate certificate is installed within the Application Load Balancer.
- D. The cipher suites on the Application Load Balancers are blocking connections.

**Answer:** D

**Explanation:**

<https://docs.IAM.amazon.com/elasticloadbalancing/latest/application/create-https-listener.html>

**NEW QUESTION 183**

- (Exam Topic 2)

A Security Engineer is building a Java application that is running on Amazon EC2. The application communicates with an Amazon RDS instance and authenticates with a user name and password.

Which combination of steps can the Engineer take to protect the credentials and minimize downtime when the credentials are rotated? (Choose two.)

- A. Have a Database Administrator encrypt the credentials and store the ciphertext in Amazon S3. Grant permission to the instance role associated with the EC2 instance to read the object and decrypt the ciphertext.
- B. Configure a scheduled job that updates the credential in IAM Systems Manager Parameter Store and notifies the Engineer that the application needs to be restarted.
- C. Configure automatic rotation of credentials in IAM Secrets Manager.
- D. Store the credential in an encrypted string parameter in IAM Systems Manager Parameter Store.
- E. Grant permission to the instance role associated with the EC2 instance to access the parameter and the IAM KMS key that is used to encrypt it.
- F. Configure the Java application to catch a connection failure and make a call to IAM Secrets Manager to retrieve updated credentials when the password is rotated.
- G. Grant permission to the instance role associated with the EC2 instance to access Secrets Manager.

**Answer:** CE

**NEW QUESTION 186**

- (Exam Topic 2)

An IAM account includes two S3 buckets: bucket1 and bucket2. The bucket2 does not have a policy defined, but bucket1 has the following bucket policy:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Principal": {"AWS": "arn:aws:iam: : 123456789012: user/alice"},
      "Action": "s3:*",
      "Resource": ["arn:aws:s3: : :bucket1", "arn:aws:s3: : :bucket1/*"]
    }
  ]
}
```

In addition, the same account has an IAM User named "alice", with the following IAM policy.

```
{
  "Version": "2012-10-17",
  "Statement": [{
    "Effect": "Allow",
    "Action": "s3:*",
    "Resource": ["arn:aws:s3: : :bucket2", "arn:aws:s3: : :bucket2/*"]
  }
]
```

Which buckets can user "alice" access?

- A. Bucket1 only
- B. Bucket2 only
- C. Both bucket1 and bucket2
- D. Neither bucket1 nor bucket2

**Answer: C**

**Explanation:**

Both S3 policies and IAM policies can be used to grant access to buckets. IAM policies specify what actions are allowed or denied on what IAM resources (e.g. allow ec2:TerminateInstance on the EC2 instance with instance\_id=i-8b3620ec). You attach IAM policies to IAM users, groups, or roles, which are then subject to the permissions you've defined. In other words, IAM policies define what a principal can do in your IAM environment. S3 bucket policies, on the other hand, are attached only to S3 buckets. S3 bucket policies specify what actions are allowed or denied for which principals on the bucket that the bucket policy is attached to (e.g. allow user Alice to PUT but not DELETE objects in the bucket).

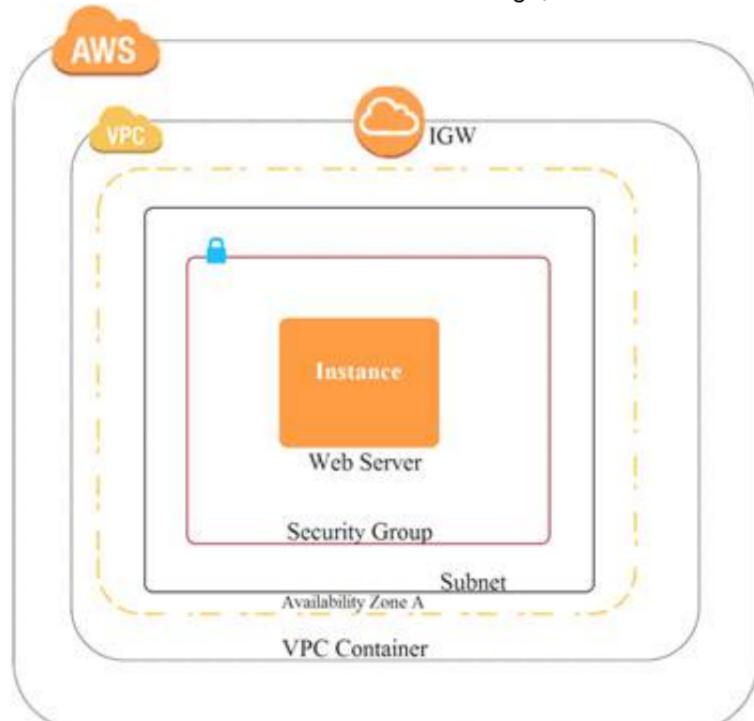
<https://IAM.amazon.com/blogs/security/iam-policies-and-bucket-policies-and-acls-oh-my-controlling-access-to>

**NEW QUESTION 189**

- (Exam Topic 2)

A company recently experienced a DDoS attack that prevented its web server from serving content. The website is static and hosts only HTML, CSS, and PDF files that users download.

Based on the architecture shown in the image, what is the BEST way to protect the site against future attacks while minimizing the ongoing operational overhead?



- A. Move all the files to an Amazon S3 bucket

- B. Have the web server serve the files from the S3 bucket.
- C. Launch a second Amazon EC2 instance in a new subne
- D. Launch an Application Load Balancer in front of both instances.
- E. Launch an Application Load Balancer in front of the EC2 instanc
- F. Create an Amazon CloudFront distribution in front of the Application Load Balancer.
- G. Move all the files to an Amazon S3 bucke
- H. Create a CloudFront distribution in front of the bucket and terminate the web server.

**Answer:** D

**Explanation:**

<https://docs.IAM.amazon.com/AmazonS3/latest/dev/WebsiteHosting.html>

**NEW QUESTION 190**

- (Exam Topic 2)

A Security Engineer is trying to determine whether the encryption keys used in an IAM service are in compliance with certain regulatory standards. Which of the following actions should the Engineer perform to get further guidance?

- A. Read the IAM Customer Agreement.
- B. Use IAM Artifact to access IAM compliance reports.
- C. Post the question on the IAM Discussion Forums.
- D. Run IAM Config and evaluate the configuration outputs.

**Answer:** B

**Explanation:**

<https://IAM.amazon.com/artifact/>

Third-party auditors assess the security and compliance of IAM Key Management Service as part of multiple IAM compliance programs. These include SOC, PCI, FedRAMP, HIPPA, and others. The compliance document is found in IAM Artifact.

**NEW QUESTION 193**

- (Exam Topic 2)

A threat assessment has identified a risk whereby an internal employee could exfiltrate sensitive data from production host running inside IAM (Account 1). The threat was documented as follows:

Threat description: A malicious actor could upload sensitive data from Server X by configuring credentials for an IAM account (Account 2) they control and uploading data to an Amazon S3 bucket within their control.

Server X has outbound internet access configured via a proxy server. Legitimate access to S3 is required so that the application can upload encrypted files to an S3 bucket. Server X is currently using an IAM instance role. The proxy server is not able to inspect any of the server communication due to TLS encryption.

Which of the following options will mitigate the threat? (Choose two.)

- A. Bypass the proxy and use an S3 VPC endpoint with a policy that whitelists only certain S3 buckets within Account 1.
- B. Block outbound access to public S3 endpoints on the proxy server.
- C. Configure Network ACLs on Server X to deny access to S3 endpoints.
- D. Modify the S3 bucket policy for the legitimate bucket to allow access only from the public IP addresses associated with the application server.
- E. Remove the IAM instance role from the application server and save API access keys in a trusted and encrypted application config file.

**Answer:** AB

**NEW QUESTION 195**

- (Exam Topic 2)

A Security Administrator has a website hosted in Amazon S3. The Administrator has been given the following requirements:

- > Users may access the website by using an Amazon CloudFront distribution.
- > Users may not access the website directly by using an Amazon S3 URL.

Which configurations will support these requirements? (Choose two.)

- A. Associate an origin access identity with the CloudFront distribution.
- B. Implement a "Principal": "cloudfront.amazonIAM.com" condition in the S3 bucket policy.
- C. Modify the S3 bucket permissions so that only the origin access identity can access the bucket contents.
- D. Implement security groups so that the S3 bucket can be accessed only by using the intended CloudFront distribution.
- E. Configure the S3 bucket policy so that it is accessible only through VPC endpoints, and place the CloudFront distribution into the specified VPC.

**Answer:** AC

**NEW QUESTION 198**

- (Exam Topic 2)

A company uses user data scripts that contain sensitive information to bootstrap Amazon EC2 instances. A Security Engineer discovers that this sensitive information is viewable by people who should not have access to it.

What is the MOST secure way to protect the sensitive information used to bootstrap the instances?

- A. Store the scripts in the AMI and encrypt the sensitive data using IAM KMS Use the instance role profile to control access to the KMS keys needed to decrypt the data.
- B. Store the sensitive data in IAM Systems Manager Parameter Store using the encrypted string parameter and assign the GetParameters permission to the EC2 instance role.
- C. Externalize the bootstrap scripts in Amazon S3 and encrypt them using IAM KM
- D. Remove the scripts from the instance and clear the logs after the instance is configured.
- E. Block user access of the EC2 instance's metadata service using IAM policie
- F. Remove all scripts and clear the logs after execution.

**Answer:** B

**NEW QUESTION 200**

- (Exam Topic 2)

You are devising a policy to allow users to have the ability to access objects in a bucket called appbucket. You define the below custom bucket policy

```
{ "ID": "Policy1502987489630",
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "Stmt1502987487640",
      "Action": [
        "s3:GetObject",
        "s3:GetObjectVersion"
      ],
      "Effect": "Allow",
      "Resource": "arn:aws:s3:::appbucket",
      "Principal": "*"
    }
  ]
}
```

But when you try to apply the policy you get the error "Action does not apply to any resource(s) in statement." What should be done to rectify the error Please select:

- A. Change the IAM permissions by applying PutBucketPolicy permissions.
- B. Verify that the policy has the same name as the bucket nam
- C. If no
- D. make it the same.
- E. Change the Resource section to "arn:IAM:s3:::appbucket/\*".
- F. Create the bucket "appbucket" and then apply the policy.

**Answer:** C

**Explanation:**

When you define access to objects in a bucket you need to ensure that you specify to which objects in the bucket access needs to be given to. In this case, the \* can be used to assign the permission to all objects in the bucket

Option A is invalid because the right permissions are already provided as per the question requirement Option B is invalid because it is not necessary that the policy has the same name as the bucket

Option D is invalid because this should be the default flow for applying the policy For more information on bucket policies please visit the below URL:

<https://docs.IAM.amazon.com/AmazonS3/latest/dev/example-bucket-policies.html>

The correct answer is: Change the Resource section to "arn:IAM:s3:::appbucket/" Submit your Feedback/Queries to our Experts

**NEW QUESTION 204**

- (Exam Topic 2)

A company has five IAM accounts and wants to use IAM CloudTrail to log API calls. The log files must be stored in an Amazon S3 bucket that resides in a new account specifically built for centralized services with a unique top-level prefix for each trail. The configuration must also enable detection of any modification to the logs.

Which of the following steps will implement these requirements? (Choose three.)

- A. Create a new S3 bucket in a separate IAM account for centralized storage of CloudTrail logs, and enable "Log File Validation" on all trails.
- B. Use an existing S3 bucket in one of the accounts, apply a bucket policy to the new centralized S3 bucket that permits the CloudTrail service to use the "s3: PutObject" action and the "s3 GetBucketACL" action, and specify the appropriate resource ARNs for the CloudTrail trails.
- C. Apply a bucket policy to the new centralized S3 bucket that permits the CloudTrail service to use the "s3 PutObject" action and the "s3 GelBucketACL" action, and specify the appropriate resource ARNs for the CloudTrail trails.
- D. Use unique log file prefixes for trails in each IAM account.
- E. Configure CloudTrail in the centralized account to log all accounts to the new centralized S3 bucket.
- F. Enable encryption of the log files by using IAM Key Management Service

**Answer:** ACE

**Explanation:**

<https://docs.IAM.amazon.com/IAMcloudtrail/latest/userguide/best-practices-security.html>

If you have created an organization in IAM Organizations, you can create a trail that will log all events for all IAM accounts in that organization. This is sometimes referred to as an organization trail. You can also choose to edit an existing trail in the master account and apply it to an organization, making it an organization trail. Organization trails log events for the master account and all member accounts in the organization. For more information about IAM Organizations, see Organizations Terminology and Concepts. Note Reference: <https://docs.IAM.amazon.com/IAMcloudtrail/latest/userguide/creating-trail-organization.html> You must be logged in with the master account for the organization in order to create an organization trail. You must also have sufficient permissions for the IAM user or role in the master account in order to successfully create an organization trail. If you do not have sufficient permissions, you will not see the option to apply a trail to an organization.

**NEW QUESTION 208**

- (Exam Topic 2)

A company stores data on an Amazon EBS volume attached to an Amazon EC2 instance. The data is asynchronously replicated to an Amazon S3 bucket. Both the EBS volume and the S3 bucket are encrypted

with the same IAM KMS Customer Master Key (CMK). A former employee scheduled a deletion of that CMK before leaving the company. The company's Developer Operations department learns about this only after the CMK has been deleted. Which steps must be taken to address this situation?

- A. Copy the data directly from the EBS encrypted volume before the volume is detached from the EC2 instance.
- B. Recover the data from the EBS encrypted volume using an earlier version of the KMS backing key.
- C. Make a request to IAM Support to recover the S3 encrypted data.
- D. Make a request to IAM Support to restore the deleted CMK, and use it to recover the data.

**Answer:** A

**Explanation:**

<https://docs.IAM.amazon.com/kms/latest/developerguide/deleting-keys.html#deleting-keys-how-it-works>

**NEW QUESTION 212**

- (Exam Topic 2)

A security alert has been raised for an Amazon EC2 instance in a customer account that is exhibiting strange behavior. The Security Engineer must first isolate the EC2 instance and then use tools for further investigation.

What should the Security Engineer use to isolate and research this event? (Choose three.)

- A. IAM CloudTrail
- B. Amazon Athena
- C. IAM Key Management Service (IAM KMS)
- D. VPC Flow Logs
- E. IAM Firewall Manager
- F. Security groups

**Answer:** ADF

**Explanation:**

[https://github.com/IAMlabs/aws-well-architected-labs/blob/master/Security/300\\_Incident\\_Response\\_with\\_IAM](https://github.com/IAMlabs/aws-well-architected-labs/blob/master/Security/300_Incident_Response_with_IAM)

**NEW QUESTION 217**

- (Exam Topic 2)

A water utility company uses a number of Amazon EC2 instances to manage updates to a fleet of 2,000 Internet of Things (IoT) field devices that monitor water quality. These devices each have unique access credentials.

An operational safety policy requires that access to specific credentials is independently auditable. What is the MOST cost-effective way to manage the storage of credentials?

- A. Use IAM Systems Manager to store the credentials as Secure Strings Parameter
- B. Secure by using an IAM KMS key.
- C. Use IAM Key Management System to store a master key, which is used to encrypt the credential
- D. The encrypted credentials are stored in an Amazon RDS instance.
- E. Use IAM Secrets Manager to store the credentials.
- F. Store the credentials in a JSON file on Amazon S3 with server-side encryption.

**Answer:** A

**Explanation:**

<https://docs.IAM.amazon.com/systems-manager/latest/userguide/parameter-store-advanced-parameters.html>

**NEW QUESTION 219**

- (Exam Topic 2)

Your company has defined a number of EC2 Instances over a period of 6 months. They want to know if any of the security groups allow unrestricted access to a resource. What is the best option to accomplish this requirement?

Please select:

- A. Use IAM Inspector to inspect all the security Groups
- B. Use the IAM Trusted Advisor to see which security groups have compromised access.
- C. Use IAM Config to see which security groups have compromised access.
- D. Use the IAM CLI to query the security groups and then filter for the rules which have unrestricted access

**Answer:** B

**Explanation:**

The IAM Trusted Advisor can check security groups for rules that allow unrestricted access to a resource. Unrestricted access increases opportunities for malicious activity (hacking, denial-of-service attacks, loss of data).

If you go to IAM Trusted Advisor, you can see the details <C:\Users\wk\Desktop\mudassar\Untitled.jpg>



Option A is invalid because IAM Inspector is used to detect security vulnerabilities in instances and not for security groups.  
 Option C is invalid because this can be used to detect changes in security groups but not show you security groups that have compromised access.  
 Option Dis partially valid but would just be a maintenance overhead  
 For more information on the IAM Trusted Advisor, please visit the below URL: <https://IAM.amazon.com/premiumsupport/trustedadvisor/best-practices>;  
 The correct answer is: Use the IAM Trusted Advisor to see which security groups have compromised access. Submit your Feedback/Queries to our Experts

**NEW QUESTION 220**

- (Exam Topic 2)

An Amazon EC2 instance is part of an EC2 Auto Scaling group that is behind an Application Load Balancer (ALB). It is suspected that the EC2 instance has been compromised.

Which steps should be taken to investigate the suspected compromise? (Choose three.)

- A. Detach the elastic network interface from the EC2 instance.
- B. Initiate an Amazon Elastic Block Store volume snapshot of all volumes on the EC2 instance.
- C. Disable any Amazon Route 53 health checks associated with the EC2 instance.
- D. De-register the EC2 instance from the ALB and detach it from the Auto Scaling group.
- E. Attach a security group that has restrictive ingress and egress rules to the EC2 instance.
- F. Add a rule to an IAM WAF to block access to the EC2 instance.

**Answer:** BDE

**Explanation:**

[https://d1.IAMstatic.com/whitepapers/IAM\\_security\\_incident\\_response.pdf](https://d1.IAMstatic.com/whitepapers/IAM_security_incident_response.pdf)

**NEW QUESTION 225**

- (Exam Topic 2)

An organization is moving non-business-critical applications to IAM while maintaining a mission-critical application in an on-premises data center. An on-premises application must share limited confidential information with the applications in IAM. The internet performance is unpredictable.

Which configuration will ensure continued connectivity between sites MOST securely?

- A. VPN and a cached storage gateway
- B. IAM Snowball Edge
- C. VPN Gateway over IAM Direct Connect
- D. IAM Direct Connect

**Answer:** C

**Explanation:**

<https://docs.IAM.amazon.com/whitepapers/latest/IAM-vpc-connectivity-options/IAM-direct-connect-plus-vpn-n>

**NEW QUESTION 227**

- (Exam Topic 2)

You are designing a custom IAM policy that would allow uses to list buckets in S3 only if they are MFA authenticated. Which of the following would best match this requirement?

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

```

"Version": "2012-10-17",
"Statement": {
  "Effect": "Allow",
  "Action": [
    "s3:ListAllMyBuckets",
    "s3:GetBucketLocation"
  ],
  "Resource": "Resource": "arn:aws:s3::*:*",
  "Condition": {
    "Bool": {"aws:MultiFactorAuthPresent": true}
  }
}
            
```
- B. C:\Users\wk\Desktop\mudassar\Untitled.jpg

```

"Version": "2012-10-17",
"Statement": {
  "Effect": "Allow",
  "Action": [
    "s3:ListAllMyBuckets",
    "s3:GetBucketLocation"
  ],
  "Resource": "Resource": "arn:aws:s3:*:*:*",
  "Condition": {
    "Bool": {"aws:MultiFactorAuthPresent":false}
  }
}

```

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

```

"Version": "2012-10-17",
"Statement": {
  "Effect": "Allow",
  "Action": [
    "s3:ListAllMyBuckets",
    "s3:GetBucketLocation"
  ],
  "Resource": "Resource": "arn:aws:s3:*:*:*",
  "Condition": {
    "aws:MultiFactorAuthPresent":false
  }
}

```

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

```

"Version": "2012-10-17",
"Statement": {
  "Effect": "Allow",
  "Action": [
    "s3:ListAllMyBuckets",
    "s3:GetBucketLocation"
  ],
  "Resource": "Resource": "arn:aws:s3:*:*:*",
  "Condition": {
    "aws:MultiFactorAuthPresent":true
  }
}

```

**Answer:** A

**Explanation:**

The Condition clause can be used to ensure users can only work with resources if they are MFA authenticated. Option B and C are wrong since the IAM:MultiFactorAuthPresent clause should be marked as true. Here you are saying that onl if the user has been MFA activated, that means it is true, then allow access.

Option D is invalid because the "boor clause is missing in the evaluation for the condition clause. Boolean conditions let you construct Condition elements that restrict access based on comparing a key to "true" or "false."

Here in this scenario the boot attribute in the condition element will return a value True for option A which will ensure that access is allowed on S3 resources. For more information on an example on such a policy, please visit the following URL:

**NEW QUESTION 232**

- (Exam Topic 2)

A Security Engineer received an IAM Abuse Notice listing EC2 instance IDs that are reportedly abusing other hosts. Which action should the Engineer take based on this situation? (Choose three.)

- A. Use IAM Artifact to capture an exact image of the state of each instance.
- B. Create EBS Snapshots of each of the volumes attached to the compromised instances.
- C. Capture a memory dump.
- D. Log in to each instance with administrative credentials to restart the instance.
- E. Revoke all network ingress and egress except for to/from a forensics workstation.
- F. Run Auto Recovery for Amazon EC2.

**Answer:** BEF

**NEW QUESTION 235**

- (Exam Topic 2)

An application has a requirement to be resilient across not only Availability Zones within the application's primary region but also be available within another region altogether.

Which of the following supports this requirement for IAM resources that are encrypted by IAM KMS?

- A. Copy the application's IAM KMS CMK from the source region to the target region so that it can be used to decrypt the resource after it is copied to the target region.
- B. Configure IAM KMS to automatically synchronize the CMK between regions so that it can be used to decrypt the resource in the target region.
- C. Use IAM services that replicate data across regions, and re-wrap the data encryption key created in the source region by using the CMK in the target region so

that the target region's CMK can decrypt the database encryption key.

D. Configure the target region's IAM service to communicate with the source region's IAM KMS so that it can decrypt the resource in the target region.

**Answer: C**

**NEW QUESTION 236**

- (Exam Topic 2)

A security team is creating a response plan in the event an employee executes unauthorized actions on IAM infrastructure. They want to include steps to determine if the employee's IAM permissions changed as part of the incident.

What steps should the team document in the plan? Please select:

A. Use IAM Config to examine the employee's IAM permissions prior to the incident and compare them to the employee's current IAM permissions.

B. Use Made to examine the employee's IAM permissions prior to the incident and compare them to the employee's A current IAM permissions.

C. Use CloudTrail to examine the employee's IAM permissions prior to the incident and compare them to the employee's current IAM permissions.

D. Use Trusted Advisor to examine the employee's IAM permissions prior to the incident and compare them to the employee's current IAM permissions.

**Answer: A**

**Explanation:**

You can use the IAMConfig history to see the history of a particular item.

The below snapshot shows an example configuration for a user in IAM Config C:\Users\wk\Desktop\mudassar\Untitled.jpg



Option B,C and D are all invalid because these services cannot be used to see the history of a particular configuration item. This can only be accomplished by IAM Config.

For more information on tracking changes in IAM Config, please visit the below URL:

<https://docs.IAM.amazon.com/AmazonCloudFront/latest/DeveloperGuide/TrackineChanees.html>

The correct answer is: Use IAM Config to examine the employee's IAM permissions prior to the incident and compare them the employee's current IAM permissions.

Submit your Feedback/Queries to our Experts

**NEW QUESTION 241**

- (Exam Topic 2)

A company uses identity federation to authenticate users into an identity account (987654321987) where the users assume an IAM role named IdentityRole. The users then assume an IAM role named JobFunctionRole in the target IAM account (123456789123) to perform their job functions.

A user is unable to assume the IAM role in the target account. The policy attached to the role in the identity account is:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Action": [
        "sts:AssumeRole"
      ],
      "Resource": [
        "arn:aws:iam::*:role/JobFunctionRole"
      ],
      "Effect": "Allow"
    }
  ]
}
```

What should be done to enable the user to assume the appropriate role in the target account?

A Update the IAM policy attached to the role in the identity account to be:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Action": [
        "sts:AssumeRole"
      ],
      "Resource": [
        "arn:aws:iam::123456789123:role/JobFunctionRole"
      ],
      "Effect": "Allow"
    }
  ]
}
```

B Update the trust policy on the role in the target account to be:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Principal": {
        "AWS": "arn:aws:iam::987654321987:role/IdentityRole"
      },
      "Action": "sts:AssumeRole"
    }
  ]
}
```

C Update the trust policy on the role in the identity account to be:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Principal": { "AWS": "arn:aws:iam::987654321987:root" },
      "Action": "sts:AssumeRole"
    }
  ]
}
```

D Update the IAM policy attached to the role in the target account to be:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "Stmt1502946463000",
      "Effect": "Allow",
      "Action": "sts:AssumeRole",
      "Resource": "arn:aws:iam::123456789123:role/JobFunctionRole"
    }
  ]
}
```

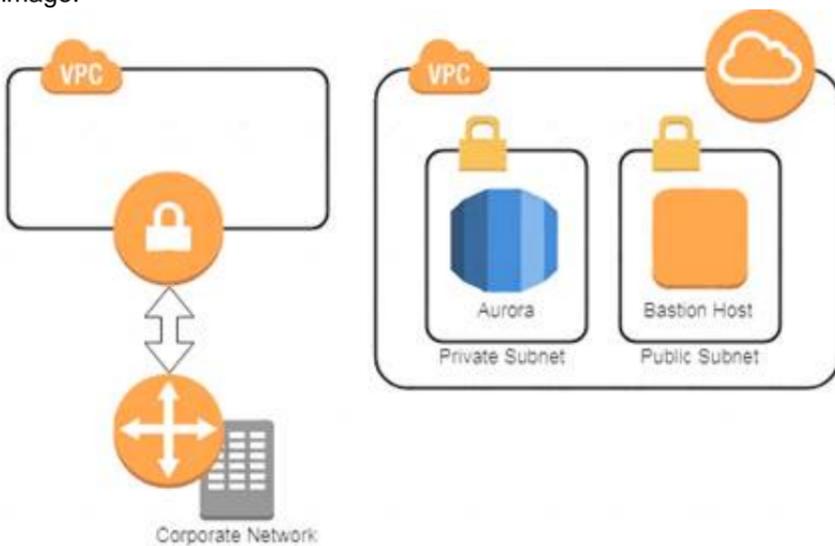
- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Answer: A**

**NEW QUESTION 246**

- (Exam Topic 2)

A company has two IAM accounts, each containing one VPC. The first VPC has a VPN connection with its corporate network. The second VPC, without a VPN, hosts an Amazon Aurora database cluster in private subnets. Developers manage the Aurora database from a bastion host in a public subnet as shown in the image.



A security review has flagged this architecture as vulnerable, and a Security Engineer has been asked to make this design more secure. The company has a short deadline and a second VPN connection to the Aurora account is not possible. How can a Security Engineer securely set up the bastion host?

- A. Move the bastion host to the VPC with VPN connectivity
- B. Create a VPC peering relationship between the bastion host VPC and Aurora VPC.
- C. Create a SSH port forwarding tunnel on the Developer's workstation to the bastion host to ensure that only authorized SSH clients can access the bastion host.

- D. Move the bastion host to the VPC with VPN connectivity
- E. Create a cross-account trust relationship between the bastion VPC and Aurora VPC, and update the Aurora security group for the relationship.
- F. Create an IAM Direct Connect connection between the corporate network and the Aurora account, and adjust the Aurora security group for this connection.

**Answer:** A

**NEW QUESTION 249**

- (Exam Topic 2)

A Security Engineer has created an Amazon CloudWatch event that invokes an IAM Lambda function daily. The Lambda function runs an Amazon Athena query that checks IAM CloudTrail logs in Amazon S3 to detect whether any IAM user accounts or credentials have been created in the past 30 days. The results of the Athena query are created in the same S3 bucket. The Engineer runs a test execution of the Lambda function via the IAM Console, and the function runs successfully.

After several minutes, the Engineer finds that his Athena query has failed with the error message: "Insufficient Permissions". The IAM permissions of the Security Engineer and the Lambda function are shown below:

Security Engineer

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "s3:*",
        "iam:*",
        "lambda:*",
        "athena:Get*",
        "athena:List*",
        "cloudwatch:*"
      ],
      "Resource": "*"
    }
  ]
}
```

Lambda function execution role

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "athena:*",
        "cloudwatch:*"
      ],
      "Resource": "*"
    }
  ]
}
```

What is causing the error?

- A. The Lambda function does not have permissions to start the Athena query execution.
- B. The Security Engineer does not have permissions to start the Athena query execution.
- C. The Athena service does not support invocation through Lambda.
- D. The Lambda function does not have permissions to access the CloudTrail S3 bucket.

**Answer:** D

**NEW QUESTION 251**

- (Exam Topic 2)

A Security Engineer must enforce the use of only Amazon EC2, Amazon S3, Amazon RDS, Amazon DynamoDB, and IAM STS in specific accounts.

What is a scalable and efficient approach to meet this requirement?

- A Set up an AWS Organizations hierarchy, and replace the FullAWSAccess policy with the following Service Control Policy for the governed organization units:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Action": [
        "dynamodb:*", "rds:*", "ec2:*",
        "s3:*", "sts:*"
      ],
      "Effect": "Allow",
      "Resource": "*"
    }
  ]
}
```

- B Create multiple IAM users for the regulated accounts, and attach the following policy statement to restrict services as required:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Action": *
      "Effect": "Allow",
      "Resource": "*"
    }
    {
      "NotAction": [
        "dynamodb:*", "rds:*", "ec2:*",
        "s3:*", "sts:*"
      ],
      "Effect": "Deny ",
      "Resource": "*"
    }
  ]
}
```

- C Set up an Organizations hierarchy, replace the global FullAWSAccess with the following Service Control Policy at the top level:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Action": [
        "dynamodb:*", "rds:*", "ec2:*",
        "s3:*", "sts:*"
      ],
      "Effect": "Allow",
      "Resource": "*"
    }
  ]
}
```

- D Set up all users in the Active Directory for federated access to all accounts in the company. Associate Active Directory groups with IAM groups, and attach the following policy statement to restrict services as required:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Action": *
      "Effect": "Allow",
      "Resource": "*"
    }
    {
      "NotAction": [
        "dynamodb:*", "rds:*", "ec2:*",
        "s3:*", "sts:*"
      ],
      "Effect": "Deny ",
      "Resource": "*"
    }
  ]
}
```

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

**Answer:** A

**Explanation:**

It says specific accounts which mean specific governed OUs under your organization and you apply specific service control policy to these OUs.

**NEW QUESTION 256**

- (Exam Topic 2)

A company's database developer has just migrated an Amazon RDS database credential to be stored and managed by IAM Secrets Manager. The developer has also enabled rotation of the credential within the Secrets Manager console and set the rotation to change every 30 days.

After a short period of time, a number of existing applications have failed with authentication errors. What is the MOST likely cause of the authentication errors?

- A. Migrating the credential to RDS requires that all access come through requests to the Secrets Manager.
- B. Enabling rotation in Secrets Manager causes the secret to rotate immediately, and the applications are using the earlier credential.
- C. The Secrets Manager IAM policy does not allow access to the RDS database.
- D. The Secrets Manager IAM policy does not allow access for the applications.

**Answer:** B

**Explanation:**

<https://docs.IAM.amazon.com/secretsmanager/latest/userguide/enable-rotation-rds.html>

**NEW QUESTION 261**

- (Exam Topic 2)

You have just recently set up a web and database tier in a VPC and hosted the application. When testing the app, you are not able to reach the home page for the app. You have verified the security groups. What can help you diagnose the issue.

Please select:

- A. Use the IAM Trusted Advisor to see what can be done.
- B. Use VPC Flow logs to diagnose the traffic
- C. Use IAM WAF to analyze the traffic
- D. Use IAM Guard Duty to analyze the traffic

**Answer:** B

**Explanation:**

Option A is invalid because this can be used to check for security issues in your account, but not verify as to why you cannot reach the home page for your application

Option C is invalid because this used to protect your app against application layer attacks, but not verify as to why you cannot reach the home page for your application

Option D is invalid because this used to protect your instance against attacks, but not verify as to why you cannot reach the home page for your application

The IAM Documentation mentions the following

VPC Flow Logs capture network flow information for a VPC, subnet or network interface and stores it in Amazon CloudWatch Logs. Flow log data can help customers troubleshoot network issues; for example, to diagnose why specific traffic is not reaching an instance, which might be a result of overly restrictive security group rules. Customers can also use flow logs as a security tool to monitor the traffic that reaches their instances, to profile network traffic, and to look for abnormal traffic behaviors.

For more information on IAM Security, please visit the following URL: <https://IAM.amazon.com/answers/networking/vpc-security-capabilities>

The correct answer is: Use VPC Flow logs to diagnose the traffic Submit your Feedback/Queries to our Experts

**NEW QUESTION 264**

- (Exam Topic 2)

IAM CloudTrail is being used to monitor API calls in an organization. An audit revealed that CloudTrail is failing to deliver events to Amazon S3 as expected.

What initial actions should be taken to allow delivery of CloudTrail events to S3? (Select two.)

- A. Verify that the S3 bucket policy allow CloudTrail to write objects.
- B. Verify that the IAM role used by CloudTrail has access to write to Amazon CloudWatch Logs.
- C. Remove any lifecycle policies on the S3 bucket that are archiving objects to Amazon Glacier.
- D. Verify that the S3 bucket defined in CloudTrail exists.
- E. Verify that the log file prefix defined in CloudTrail exists in the S3 bucket.

**Answer:** BD

**Explanation:**

<https://docs.IAM.amazon.com/IAMcloudtrail/latest/userguide/create-s3-bucket-policy-for-cloudtrail.html>

**NEW QUESTION 265**

- (Exam Topic 2)

A distributed web application is installed across several EC2 instances in public subnets residing in two Availability Zones. Apache logs show several intermittent brute-force attacks from hundreds of IP addresses at the layer 7 level over the past six months.

What would be the BEST way to reduce the potential impact of these attacks in the future?

- A. Use custom route tables to prevent malicious traffic from routing to the instances.
- B. Update security groups to deny traffic from the originating source IP addresses.
- C. Use network ACLs.
- D. Install intrusion prevention software (IPS) on each instance.

**Answer:** D

**Explanation:**

<https://docs.IAM.amazon.com/vpc/latest/userguide/amazon-vpc-limits.html> NACL has limit 20 (can increase to maximum 40 rule), and more rule will make more low-latency

**NEW QUESTION 268**

- (Exam Topic 2)

An organization receives an alert that indicates that an EC2 instance behind an ELB Classic Load Balancer has been compromised. What techniques will limit lateral movement and allow evidence gathering?

- A. Remove the instance from the load balancer and terminate it.
- B. Remove the instance from the load balancer, and shut down access to the instance by tightening the security group.
- C. Reboot the instance and check for any Amazon CloudWatch alarms.
- D. Stop the instance and make a snapshot of the root EBS volume.

**Answer:** B

**Explanation:**

[https://d1.IAMstatic.com/whitepapers/IAM\\_security\\_incident\\_response.pdf](https://d1.IAMstatic.com/whitepapers/IAM_security_incident_response.pdf)

**NEW QUESTION 273**

- (Exam Topic 2)

An application makes calls to IAM services using the IAM SDK. The application runs on Amazon EC2 instances with an associated IAM role. When the application attempts to access an object within an Amazon S3 bucket; the Administrator receives the following error message: HTTP 403: Access Denied. Which combination of steps should the Administrator take to troubleshoot this issue? (Select three.)

- A. Confirm that the EC2 instance's security group authorizes S3 access.
- B. Verify that the KMS key policy allows decrypt access for the KMS key for this IAM principle.
- C. Check the S3 bucket policy for statements that deny access to objects.
- D. Confirm that the EC2 instance is using the correct key pair.
- E. Confirm that the IAM role associated with the EC2 instance has the proper privileges.
- F. Confirm that the instance and the S3 bucket are in the same Region.

**Answer:** BCE

**NEW QUESTION 276**

- (Exam Topic 2)

A Systems Administrator has written the following Amazon S3 bucket policy designed to allow access to an S3 bucket for only an authorized IAM IAM user from the IP address range 10.10.10.0/24:

```
{
  "Version": "2012-10-17",
  "Id": "S3Policy1",
  "Statement": [
    {
      "Sid": ["OfficeAllowIP"],
      "Effect": ["Allow"],
      "Principal": ["*"],
      "Action": ["s3:*"],
      "Resource": ["arn:aws:s3:::Bucket"],
      "Condition": {
        "IpAddress": [
          {
            "aws:SourceIp": "10.10.10.0/24"
          }
        ]
      }
    }
  ]
}
```

When trying to download an object from the S3 bucket from 10.10.10.40, the IAM user receives an access denied message. What does the Administrator need to change to grant access to the user?

- A. Change the "Resource" from "arn: IAM:s3:::Bucket" to "arn:IAM:s3:::Bucket/\*".
- B. Change the "Principal" from "\*" to {"IAM:"arn:IAM:iam: : account-number: user/username"}
- C. Change the "Version" from "2012-10-17" to the last revised date of the policy
- D. Change the "Action" from ["s3:\*"] to ["s3:GetObject", "s3:ListBucket"]

**Answer:** A

**NEW QUESTION 280**

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