

Amazon

Exam Questions AWS-Certified-DevOps-Engineer-Professional

Amazon AWS Certified DevOps Engineer Professional



NEW QUESTION 1

A company has containerized all of its in-house quality control applications. The company is running Jenkins on Amazon EC2 instances, which require patching and upgrading. The compliance officer has requested a DevOps engineer begin encrypting build artifacts since they contain company intellectual property. What should the DevOps engineer do to accomplish this in the MOST maintainable manner?

- A. Automate patching and upgrading using AWS Systems Manager on EC2 instances and encrypt Amazon EBS volumes by default.
- B. Deploy Jenkins to an Amazon ECS cluster and copy build artifacts to an Amazon S3 bucket with default encryption enabled.
- C. Leverage AWS CodePipeline with a build action and encrypt the artifacts using AWS Secrets Manager.
- D. Use AWS CodeBuild with artifact encryption to replace the Jenkins instance running on EC2 instances.

Answer: D

Explanation:

The following are the steps involved in accomplishing this in the most maintainable manner:

? Use AWS CodeBuild with artifact encryption to replace the Jenkins instance running on EC2 instances.

? Configure CodeBuild to encrypt the build artifacts using AWS Secrets Manager.

? Deploy the containerized quality control applications to CodeBuild.

This approach is the most maintainable because it eliminates the need to manage Jenkins on EC2 instances. CodeBuild is a managed service, so the DevOps engineer does not need to worry about patching or upgrading the service. <https://docs.aws.amazon.com/codebuild/latest/userguide/security-encryption.html> Build artifact encryption - CodeBuild requires access to an AWS KMS CMK in order to encrypt its build output artifacts. By default, CodeBuild uses an AWS Key Management Service CMK for Amazon S3 in your AWS account. If you do not want to use this CMK, you must create and configure a customer-managed CMK. For more information Creating keys.

NEW QUESTION 2

A company is storing 100 GB of log data in csv format in an Amazon S3 bucket SQL developers want to query this data and generate graphs to visualize it. The SQL developers also need an efficient automated way to store metadata from the csv file.

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

- A. Filter the data through AWS X-Ray to visualize the data.
- B. Filter the data through Amazon QuickSight to visualize the data.
- C. Query the data with Amazon Athena.
- D. Query the data with Amazon Redshift.
- E. Use the AWS Glue Data Catalog as the persistent metadata store.
- F. Use Amazon DynamoDB as the persistent metadata store.

Answer: BCE

Explanation:

<https://docs.aws.amazon.com/glue/latest/dg/components-overview.html>

NEW QUESTION 3

A DevOps engineer used an AWS Cloud Formation custom resource to set up AD Connector. The AWS Lambda function ran and created AD Connector, but Cloud Formation is not transitioning from CREATE_IN_PROGRESS to CREATE_COMPLETE.

Which action should the engineer take to resolve this issue?

- A. Ensure the Lambda function code has exited successfully.
- B. Ensure the Lambda function code returns a response to the pre-signed URL.
- C. Ensure the Lambda function IAM role has cloudformation UpdateStack permissions for the stack ARN.
- D. Ensure the Lambda function IAM role has ds ConnectDirectory permissions for the AWS account.

Answer: B

Explanation:

Reference: <https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/crpg-ref-responses.html>

NEW QUESTION 4

A company's security team requires that all external Application Load Balancers (ALBs) and Amazon API Gateway APIs are associated with AWS WAF web ACLs. The company

has hundreds of AWS accounts, all of which are included in a single organization in AWS Organizations. The company has configured AWS Config for the organization. During an audit, the company finds some externally facing ALBs that are not associated with AWS WAF web ACLs.

Which combination of steps should a DevOps engineer take to prevent future violations? (Choose two.)

- A. Delegate AWS Firewall Manager to a security account.
- B. Delegate Amazon GuardDuty to a security account.
- C. Create an AWS Firewall Manager policy to attach AWS WAF web ACLs to any newly created ALBs and API Gateway APIs.
- D. Create an Amazon GuardDuty policy to attach AWS WAF web ACLs to any newly created ALBs and API Gateway APIs.
- E. Configure an AWS Config managed rule to attach AWS WAF web ACLs to any newly created ALBs and API Gateway APIs.

Answer: AC

Explanation:

If instead you want to automatically apply the policy to existing in-scope resources, choose Auto remediate any noncompliant resources. This option creates a web ACL in each applicable account within the AWS organization and associates the web ACL with the resources in the accounts. When you choose Auto remediate any noncompliant resources, you can also choose to remove existing web ACL associations from in-scope resources, for the web ACLs that aren't managed by another active Firewall Manager policy. If you choose this option, Firewall Manager first associates the policy's web ACL with the resources, and then removes the prior associations. If a resource has an association with another web ACL that's managed by a different active Firewall Manager policy, this choice

doesn't affect that association.

NEW QUESTION 5

A company uses AWS Storage Gateway in file gateway mode in front of an Amazon S3 bucket that is used by multiple resources. In the morning when business begins, users do not see the objects processed by a third party the previous evening. When a DevOps engineer looks directly at the S3 bucket, the data is there, but it is missing in Storage Gateway.

Which solution ensures that all the updated third-party files are available in the morning?

- A. Configure a nightly Amazon EventBridge event to invoke an AWS Lambda function to run the RefreshCache command for Storage Gateway.
- B. Instruct the third party to put data into the S3 bucket using AWS Transfer for SFTP.
- C. Modify Storage Gateway to run in volume gateway mode.
- D. Use S3 Same-Region Replication to replicate any changes made directly in the S3 bucket to Storage Gateway.

Answer: A

Explanation:

https://docs.aws.amazon.com/storagegateway/latest/APIReference/API_RefreshCache.html " It only updates the cached inventory to reflect changes in the inventory of the objects in the S3 bucket. This operation is only supported in the S3 File Gateway types."

NEW QUESTION 6

A company uses AWS Organizations to manage multiple accounts. Information security policies require that all unencrypted Amazon EBS volumes be marked as non-compliant. A DevOps engineer needs to automatically deploy the solution and ensure that this compliance check is always present.

Which solution will accomplish this?

- A. Create an AWS CloudFormation template that defines an AWS Inspector rule to check whether EBS encryption is enable
- B. Save the template to an Amazon S3 bucket that has been shared with all accounts within the compan
- C. Update the account creation script pointing to the CloudFormation template in Amazon S3.
- D. Create an AWS Config organizational rule to check whether EBS encryption is enabled and deploy the rule using the AWS CL
- E. Create and apply an SCP to prohibit stopping and deleting AWS Config across the organization.
- F. Create an SCP in Organization
- G. Set the policy to prevent the launch of Amazon EC2 instances without encryption on the EBS volumes using a conditional expressio
- H. Apply the SCP to all AWS account
- I. Use Amazon Athena to analyze the AWS CloudTrail output, looking for events that deny an ec2: RunInstances action.
- J. Deploy an IAM role to all accounts from a single trusted accoun
- K. Build a pipeline with AWS CodePipeline with a stage in AWS Lambda to assume the IAM role, and list all EBS volumes in the accoun
- L. Publish a report to Amazon S3.

Answer: B

Explanation:

<https://docs.aws.amazon.com/config/latest/developerguide/ec2-ebs-encryption-by-default.html>

NEW QUESTION 7

A company updated the AWS Cloud Formation template for a critical business application. The stack update process failed due to an error in the updated template and AWS CloudFormation automatically began the stack rollback process Later a DevOps engineer discovered that the application was still unavailable and that the stack was in the UPDATE_ROLLBACK_FAILED state.

Which combination of actions should the DevOps engineer perform so that the stack rollback can complete successfully? (Select TWO.)

- A. Attach the AWSCloudFormationFullAccess IAM policy to the AWS CloudFormation role.
- B. Automatically recover the stack resources by using AWS CloudFormation drift detection.
- C. Issue a ContinueUpdateRollback command from the AWS CloudFormation console or the AWS CLI.
- D. Manually adjust the resources to match the expectations of the stack.
- E. Update the existing AWS CloudFormation stack by using the original template.

Answer: CD

Explanation:

<https://docs.aws.amazon.com/cli/latest/reference/cloudformation/continue-update-rollback.html> For a specified stack that is in the UPDATE_ROLLBACK_FAILED state, continues rolling it back to the UPDATE_ROLLBACK_COMPLETE state. Depending on the cause of the failure, you can manually fix the error and continue the rollback. By continuing the rollback, you can return your stack to a working state (the UPDATE_ROLLBACK_COMPLETE state), and then try to update the stack again.

NEW QUESTION 8

A company manages an application that stores logs in Amazon CloudWatch Logs. The company wants to archive the logs to an Amazon S3 bucket Logs are rarely accessed after 90 days and must be retained for 10 years.

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

- A. Configure a CloudWatch Logs subscription filter to use AWS Glue to transfer all logs to an S3 bucket.
- B. Configure a CloudWatch Logs subscription filter to use Amazon Kinesis Data Firehose to stream all logs to an S3 bucket.
- C. Configure a CloudWatch Logs subscription filter to stream all logs to an S3 bucket.
- D. Configure the S3 bucket lifecycle policy to transition logs to S3 Glacier after 90 days and to expire logs after 3.650 days.
- E. Configure the S3 bucket lifecycle policy to transition logs to Reduced Redundancy after 90 days and to expire logs after 3.650 days.

Answer: BD

Explanation:

<https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/SubscriptionFilters.html>

NEW QUESTION 9

An application running on a set of Amazon EC2 instances in an Auto Scaling group requires a configuration file to operate. The instances are created and maintained with AWS CloudFormation. A DevOps engineer wants the instances to have the latest configuration file when launched and wants changes to the configuration file to be reflected on all the instances with a minimal delay when the CloudFormation template is updated. Company policy requires that application configuration files be maintained along with AWS infrastructure configuration files in source control.

Which solution will accomplish this?

- A. In the CloudFormation template add an AWS Config rule
- B. Place the configuration file content in the rule's InputParameters property and set the Scope property to the EC2 Auto Scaling group
- C. Add an AWS Systems Manager Resource Data Sync resource to the template to poll for updates to the configuration.
- D. In the CloudFormation template add an EC2 launch template resource
- E. Place the configuration file content in the launch template
- F. Configure the cfn-init script to run when the instance is launched and configure the cfn-hup script to poll for updates to the configuration.
- G. In the CloudFormation template add an EC2 launch template resource
- H. Place the configuration file content in the launch template
- I. Add an AWS Systems Manager Resource Data Sync resource to the template to poll for updates to the configuration.
- J. In the CloudFormation template add CloudFormation intrinsic metadata
- K. Place the configuration file content in the metadata
- L. Configure the cfn-init script to run when the instance is launched and configure the cfn-hup script to poll for updates to the configuration.

Answer: D

Explanation:

Use the AWS::CloudFormation::Init type to include metadata on an Amazon EC2 instance for the cfn-init helper script. If your template calls the cfn-init script, the script looks for resource metadata rooted in the AWS::CloudFormation::Init metadata key. Reference: <https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-resource-init.html>

NEW QUESTION 10

A DevOps engineer has implemented a CI/CO pipeline to deploy an AWS CloudFormation template that provisions a web application. The web application consists of an Application Load Balancer (ALB) target group, a launch template that uses an Amazon Linux 2 AMI in an Auto Scaling group of Amazon EC2 instances, a security group and an Amazon RDS for MySQL database. The launch template includes user data that specifies a script to install and start the application.

The initial deployment of the application was successful. The DevOps engineer made changes to update the version of the application with the user data. The CI/CD pipeline has deployed a new version of the template. However, the health checks on the ALB are now failing. The health checks have marked all targets as unhealthy.

During investigation the DevOps engineer notices that the CloudFormation stack has a status of UPDATE_COMPLETE. However, when the DevOps engineer connects to one of the EC2 instances and checks /var/log messages, the DevOps engineer notices that the Apache web server failed to start successfully because of a configuration error.

How can the DevOps engineer ensure that the CloudFormation deployment will fail if the user data fails to successfully finish running?

- A. Use the cfn-signal helper script to signal success or failure to CloudFormation. Use the WaitOnResourceSignals update policy within the CloudFormation template. Set an appropriate timeout for the update policy.
- B. Create an Amazon CloudWatch alarm for the UnhealthyHostCount metric
- C. Include an appropriate alarm threshold for the target group. Create an Amazon Simple Notification Service (Amazon SNS) topic as the target to signal success or failure to CloudFormation.
- D. Create a lifecycle hook on the Auto Scaling group by using the AWS AutoScaling LifecycleHook resource. Create an Amazon Simple Notification Service (Amazon SNS) topic as the target to signal success or failure to CloudFormation. Set an appropriate timeout on the lifecycle hook.
- E. Use the Amazon CloudWatch agent to stream the cloud-init logs. Create a subscription filter that includes an AWS Lambda function with an appropriate invocation timeout. Configure the Lambda function to use the SignalResource API operation to signal success or failure to CloudFormation.

Answer: A

Explanation:

<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-attribute-updatepolicy.html>

NEW QUESTION 11

A rapidly growing company wants to scale for developer demand for AWS development environments. Development environments are created manually in the AWS Management Console. The networking team uses AWS CloudFormation to manage the networking infrastructure, exporting stack output values for the Amazon VPC and all subnets. The development environments have common standards, such as Application Load Balancers, Amazon EC2 Auto Scaling groups, security groups, and Amazon DynamoDB tables.

To keep up with demand, the DevOps engineer wants to automate the creation of development environments. Because the infrastructure required to support the application is expected to grow, there must be a way to easily update the deployed infrastructure. CloudFormation will be used to create a template for the development environments.

Which approach will meet these requirements and quickly provide consistent AWS environments for developers?

- A. Use Fn::ImportValue intrinsic functions in the Resources section of the template to retrieve Virtual Private Cloud (VPC) and subnet values
- B. Use CloudFormation StackSets for the development environments, using the Count input parameter to indicate the number of environments needed
- C. Use the UpdateStackSet command to update existing development environments.
- D. Use nested stacks to define common infrastructure components
- E. To access the exported values, use TemplateURL to reference the networking team's template
- F. To retrieve Virtual Private Cloud (VPC) and subnet values, use Fn::ImportValue intrinsic functions in the Parameters section of the root template
- G. Use the CreateChangeSet and ExecuteChangeSet commands to update existing development environments.
- H. Use nested stacks to define common infrastructure components
- I. Use Fn::ImportValue intrinsic functions with the resources of the nested stack to retrieve Virtual Private Cloud (VPC) and subnet values
- J. Use the CreateChangeSet and ExecuteChangeSet commands to update existing development environments.
- K. Use Fn::ImportValue intrinsic functions in the Parameters section of the root template to retrieve Virtual Private Cloud (VPC) and subnet values
- L. Define the development resources in the order they need to be created in the CloudFormation nested stack
- M. Use the CreateChangeSet
- N. and ExecuteChangeSet commands to update existing development environments.

Answer: C

Explanation:

<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/intrinsic-function-reference-importvalue.html>
<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/intrinsic-function-reference-importvalue.html> CF of network exports the VPC, subnet or needed information CF of application imports the above information to its stack and UpdateChangeSet/ ExecuteChangeSet

NEW QUESTION 12

A company is performing vulnerability scanning for all Amazon EC2 instances across many accounts. The accounts are in an organization in AWS Organizations. Each account's VPCs are attached to a shared transit gateway. The VPCs send traffic to the internet through a central egress VPC. The company has enabled Amazon Inspector in a delegated administrator account and has enabled scanning for all member accounts. A DevOps engineer discovers that some EC2 instances are listed in the "not scanning" tab in Amazon Inspector. Which combination of actions should the DevOps engineer take to resolve this issue? (Choose three.)

- A. Verify that AWS Systems Manager Agent is installed and is running on the EC2 instances that Amazon Inspector is not scanning.
- B. Associate the target EC2 instances with security groups that allow outbound communication on port 443 to the AWS Systems Manager service endpoint.
- C. Grant inspector: StartAssessmentRun permissions to the IAM role that the DevOps engineer is using.
- D. Configure EC2 Instance Connect for the EC2 instances that Amazon Inspector is not scanning.
- E. Associate the target EC2 instances with instance profiles that grant permissions to communicate with AWS Systems Manager.
- F. Create a managed-instance activation
- G. Use the Activation Code and the Activation ID to register the EC2 instances.

Answer: ABE

Explanation:

<https://docs.aws.amazon.com/inspector/latest/user/scanning-ec2.html>

NEW QUESTION 13

A company that runs many workloads on AWS has an Amazon EBS spend that has increased over time. The DevOps team notices there are many unattached EBS volumes. Although there are workloads where volumes are detached, volumes over 14 days old are stale and no longer needed. A DevOps engineer has been tasked with creating automation that deletes unattached EBS volumes that have been unattached for 14 days. Which solution will accomplish this?

- A. Configure the AWS Config ec2-volume-in-use-check managed rule with a configuration changes trigger type and an Amazon EC2 volume resource target
- B. Create a new Amazon CloudWatch Events rule scheduled to execute an AWS Lambda function in 14 days to delete the specified EBS volume.
- C. Use Amazon EC2 and Amazon Data Lifecycle Manager to configure a volume lifecycle policy
- D. Set the interval period for unattached EBS volumes to 14 days and set the retention rule to delete
- E. Set the policy target volumes as *
- F. Create an Amazon CloudWatch Events rule to execute an AWS Lambda function daily
- G. The Lambda function should find unattached EBS volumes and tag them with the current date, and delete unattached volumes that have tags with dates that are more than 14 days old.
- H. Use AWS Trusted Advisor to detect EBS volumes that have been detached for more than 14 days
- I. Execute an AWS Lambda function that creates a snapshot and then deletes the EBS volume.

Answer: C

Explanation:

The requirement is to create automation that deletes unattached EBS volumes that have been unattached for 14 days. To do this, the DevOps engineer needs to use the following steps:

? Create an Amazon CloudWatch Events rule to execute an AWS Lambda function daily. CloudWatch Events is a service that enables event-driven architectures by delivering events from various sources to targets. Lambda is a service that lets you run code without provisioning or managing servers. By creating a CloudWatch Events rule that executes a Lambda function daily, the DevOps engineer can schedule a recurring task to check and delete unattached EBS volumes.
? The Lambda function should find unattached EBS volumes and tag them with the current date, and delete unattached volumes that have tags with dates that are more than 14 days old. The Lambda function can use the EC2 API to list and filter unattached EBS volumes based on their state and tags. The function can then tag each unattached volume with the current date using the create-tags command. The function can also compare the tag value with the current date and delete any unattached volume that has been tagged more than 14 days ago using the delete-volume command.

NEW QUESTION 14

A company has migrated its container-based applications to Amazon EKS and want to establish automated email notifications. The notifications sent to each email address are for specific activities related to EKS components. The solution will include Amazon SNS topics and an AWS Lambda function to evaluate incoming log events and publish messages to the correct SNS topic. Which logging solution will support these requirements?

- A. Enable Amazon CloudWatch Logs to log the EKS component
- B. Create a CloudWatch subscription filter for each component with Lambda as the subscription feed destination.
- C. Enable Amazon CloudWatch Logs to log the EKS component
- D. Create CloudWatch Logs Insights queries linked to Amazon EventBridge events that invoke Lambda.
- E. Enable Amazon S3 logging for the EKS component
- F. Configure an Amazon CloudWatch subscription filter for each component with Lambda as the subscription feed destination.
- G. Enable Amazon S3 logging for the EKS component
- H. Configure S3 PUT Object event notifications with AWS Lambda as the destination.

Answer: A

Explanation:

<https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/SubscriptionFilters.html#LambdaFunctionExample>
<https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/SubscriptionFilters.html>

NEW QUESTION 15

A company has multiple AWS accounts. The company uses AWS IAM Identity Center (AWS Single Sign-On) that is integrated with AWS Toolkit for Microsoft Azure DevOps. The attributes for access control feature is enabled in IAM Identity Center.

The attribute mapping list contains two entries. The department key is mapped to

`${path:enterprise.department}`. The costCenter key is mapped to

`${path:enterprise.costCenter}`.

All existing Amazon EC2 instances have a department tag that corresponds to three company departments (d1, d2, d3). A DevOps engineer must create policies based on the matching attributes. The policies must minimize administrative effort and must grant each Azure AD user access to only the EC2 instances that are tagged with the user's respective department name.

Which condition key should the DevOps engineer include in the custom permissions policies to meet these requirements?

A.

```
"Condition": {
  "ForAllValues:StringEquals": {
    "aws:TagKeys": ["department"]
  }
}
```

B.

```
"Condition": {
  "StringEquals": {
    "aws:PrincipalTag/department": "${aws:ResourceTag/department}"
  }
}
```

C.

```
"Condition": {
  "StringEquals": {
    "ec2:ResourceTag/department": "${aws:PrincipalTag/department}"
  }
}
```

D.

```
"Condition": {
  "ForAllValues:StringEquals": {
    "ec2:ResourceTag/department": ["d1", "d2", "d3"]
  }
}
```

A.

Answer: C

Explanation:

<https://docs.aws.amazon.com/singlesignon/latest/userguide/configure-abac.html>

NEW QUESTION 16

A DevOps team manages an API running on-premises that serves as a backend for an Amazon API Gateway endpoint. Customers have been complaining about high response latencies, which the development team has verified using the API Gateway latency metrics in Amazon CloudWatch. To identify the cause, the team needs to collect relevant data without introducing additional latency.

Which actions should be taken to accomplish this? (Choose two.)

- A. Install the CloudWatch agent server side and configure the agent to upload relevant logs to CloudWatch.
- B. Enable AWS X-Ray tracing in API Gateway, modify the application to capture request segments, and upload those segments to X-Ray during each request.
- C. Enable AWS X-Ray tracing in API Gateway, modify the application to capture request segments, and use the X-Ray daemon to upload segments to X-Ray.
- D. Modify the on-premises application to send log information back to API Gateway with each request.
- E. Modify the on-premises application to calculate and upload statistical data relevant to the API service requests to CloudWatch metrics.

Answer: AC

Explanation:

<https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/install-CloudWatch-Agent-on-premise.html>

<https://docs.aws.amazon.com/xray/latest/devguide/xray-api-sendingdata.html>

NEW QUESTION 17

A company manages multiple AWS accounts by using AWS Organizations with OUS for the different business divisions, The company is updating their corporate network to use new IP address ranges. The company has 10 Amazon S3 buckets in different AWS accounts. The S3 buckets store reports for the different

divisions. The S3 bucket configurations allow only private corporate network IP addresses to access the S3 buckets. A DevOps engineer needs to change the range of IP addresses that have permission to access the contents of the S3 buckets. The DevOps engineer also needs to revoke the permissions of two OUS in the company. Which solution will meet these requirements?

- A. Create a new SCP that has two statements, one that allows access to the new range of IP addresses for all the S3 buckets and one that denies access to the old range of IP addresses for all the S3 bucket
- B. Set a permissions boundary for the OrganizationAccountAccessRole role in the two OUS to deny access to the S3 buckets.
- C. Create a new SCP that has a statement that allows only the new range of IP addresses to access the S3 bucket
- D. Create another SCP that denies access to the S3 bucket
- E. Attach the second SCP to the two OUS
- F. On all the S3 buckets, configure resource-based policies that allow only the new range of IP addresses to access the S3 bucket
- G. Create a new SCP that denies access to the S3 bucket
- H. Attach the SCP to the two OUs.
- I. On all the S3 buckets, configure resource-based policies that allow only the new range of IP addresses to access the S3 bucket
- J. Set a permissions boundary for the OrganizationAccountAccessRole role in the two OUS to deny access to the S3 buckets.

Answer: C

Explanation:

The correct answer is C.

A comprehensive and detailed explanation is:

? Option A is incorrect because creating a new SCP that has two statements, one that allows access to the new range of IP addresses for all the S3 buckets and one that denies access to the old range of IP addresses for all the S3 buckets, is not a valid solution. SCPs are not resource-based policies, and they cannot specify the S3 buckets or the IP addresses as resources or conditions. SCPs can only control the actions that can be performed by the principals in the organization, not the access to specific resources. Moreover, setting a permissions boundary for the OrganizationAccountAccessRole role in the two OUs to deny access to the S3 buckets is not sufficient to revoke the permissions of the two OUs, as there might be other roles or users in those OUs that can still access the S3 buckets.

? Option B is incorrect because creating a new SCP that has a statement that allows only the new range of IP addresses to access the S3 buckets is not a valid solution, for the same reason as option A. SCPs are not resource-based policies, and they cannot specify the S3 buckets or the IP addresses as resources or conditions. Creating another SCP that denies access to the S3 buckets and attaching it to the two OUs is also not a valid solution, as SCPs cannot specify the S3 buckets as resources either.

? Option C is correct because it meets both requirements of changing the range of IP addresses that have permission to access the contents of the S3 buckets and revoking the permissions of two OUs in the company. On all the S3 buckets, configuring resource-based policies that allow only the new range of IP addresses to access the S3 buckets is a valid way to update the IP address ranges, as resource-based policies can specify both resources and conditions. Creating a new SCP that denies access to the S3 buckets and attaching it to the two OUs is also a valid way to revoke the permissions of those OUs, as SCPs can deny actions such as s3:PutObject or s3:GetObject on any resource.

? Option D is incorrect because setting a permissions boundary for the OrganizationAccountAccessRole role in the two OUs to deny access to the S3 buckets is not sufficient to revoke the permissions of the two OUs, as there might be other roles or users in those OUs that can still access the S3 buckets. A permissions boundary is a policy that defines the maximum permissions that an IAM entity can have. However, it does not revoke any existing permissions that are granted by other policies.

References:

- ? AWS Organizations
- ? S3 Bucket Policies
- ? Service Control Policies
- ? Permissions Boundaries

NEW QUESTION 18

A growing company manages more than 50 accounts in an organization in AWS Organizations. The company has configured its applications to send logs to Amazon CloudWatch Logs.

A DevOps engineer needs to aggregate logs so that the company can quickly search the logs to respond to future security incidents. The DevOps engineer has created a new AWS account for centralized monitoring.

Which combination of steps should the DevOps engineer take to make the application logs searchable from the monitoring account? (Select THREE.)

- A. In the monitoring account, download an AWS CloudFormation template from CloudWatch to use in Organization
- B. Use CloudFormation StackSets in the organization's management account to deploy the CloudFormation template to the entire organization.
- C. Create an AWS CloudFormation template that defines an IAM role
- D. Configure the role to allow logs-amazonaws.com to perform the logs:Link action if the aws:ResourceAccount property is equal to the monitoring account ID
- E. Use CloudFormation StackSets in the organization's management account to deploy the CloudFormation template to the entire organization.
- F. Create an IAM role in the monitoring account
- G. Attach a trust policy that allows logs.amazonaws.com to perform the iam:CreateSink action if the aws:PrincipalOrgId property is equal to the organization ID.
- H. In the organization's management account, enable the logging policies for the organization.
- I. Use CloudWatch Observability Access Manager in the monitoring account to create a sink
- J. Allow logs to be shared with the monitoring account
- K. Configure the monitoring account data selection to view the Observability data from the organization ID.
- L. In the monitoring account, attach the CloudWatchLogsReadOnlyAccess AWS managed policy to an IAM role that can be assumed to search the logs.

Answer: BCF

Explanation:

? To aggregate logs from multiple accounts in an organization, the DevOps engineer needs to create a cross-account subscription¹ that allows the monitoring account to receive log events from the sharing accounts.

? To enable cross-account subscription, the DevOps engineer needs to create an IAM role in each sharing account that grants permission to CloudWatch Logs to link the log groups to the destination in the monitoring account². This can be done using a CloudFormation template and StackSets³ to deploy the role to all accounts in the organization.

? The DevOps engineer also needs to create an IAM role in the monitoring account that allows CloudWatch Logs to create a sink for receiving log events from other accounts⁴. The role must have a trust policy that specifies the organization ID as a condition.

? Finally, the DevOps engineer needs to attach the CloudWatchLogsReadOnlyAccess policy⁵ to an IAM role in the monitoring account that can be used to search the logs from the cross-account subscription.

References: 1: Cross-account log data sharing with subscriptions 2: Create an IAM role for CloudWatch Logs in each sharing account 3: AWS CloudFormation StackSets 4: Create an IAM role for CloudWatch Logs in your monitoring account 5: CloudWatchLogsReadOnlyAccess policy

NEW QUESTION 19

A DevOps engineer is implementing governance controls for a company that requires its infrastructure to be housed within the United States. The engineer must restrict which AWS Regions can be used, and ensure an alert is sent as soon as possible if any activity outside the governance policy takes place. The controls should be automatically enabled on any new Region outside the United States (US).

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

- A. Create an AWS Organizations SCP that denies access to all non-global services in non- US Region
- B. Attach the policy to the root of the organization.
- C. Configure AWS CloudTrail to send logs to Amazon CloudWatch Logs and enable it for all Region
- D. Use a CloudWatch Logs metric filter to send an alert on any service activity in non-US Regions.
- E. Use an AWS Lambda function that checks for AWS service activity and deploy it to all Region
- F. Write an Amazon EventBridge rule that runs the Lambda function every hour, sending an alert if activity is found in a non-US Region.
- G. Use an AWS Lambda function to query Amazon Inspector to look for service activity in non-US Regions and send alerts if any activity is found.
- H. Write an SCP using the aws: RequestedRegion condition key limiting access to US Region
- I. Apply the policy to all users, groups, and roles

Answer: AB

Explanation:

To implement governance controls that restrict AWS service usage to within the United States and ensure alerts for any activity outside the governance policy, the following actions will meet the requirements:

? A. Create an AWS Organizations SCP that denies access to all non-global services in non-US Regions. Attach the policy to the root of the organization. This action will effectively prevent users and roles in all accounts within the organization from accessing services in non-US Regions¹².

? B. Configure AWS CloudTrail to send logs to Amazon CloudWatch Logs and enable it for all Regions. Use a CloudWatch Logs metric filter to send an alert on any service activity in non-US Regions. This action will allow monitoring of all AWS Regions and will trigger alerts if any activity is detected in non-US Regions, ensuring that the governance team is notified as soon as possible³.

References:

? AWS Documentation on Service Control Policies (SCPs) and how they can be used to manage permissions and restrict access based on Regions¹².

? AWS Documentation on monitoring CloudTrail log files with Amazon CloudWatch Logs to set up alerts for specific activities³.

NEW QUESTION 20

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