



Amazon-Web-Services

Exam Questions DOP-C02

AWS Certified DevOps Engineer - Professional

NEW QUESTION 1

A company runs applications in AWS accounts that are in an organization in AWS Organizations. The applications use Amazon EC2 instances and Amazon S3. The company wants to detect potentially compromised EC2 instances, suspicious network activity, and unusual API activity in its existing AWS accounts and in any AWS accounts that the company creates in the future. When the company detects one of these events, the company wants to use an existing Amazon Simple Notification Service (Amazon SNS) topic to send a notification to its operational support team for investigation and remediation. Which solution will meet these requirements in accordance with AWS best practices?

- A. In the organization's management account, configure an AWS account as the Amazon GuardDuty administrator account.
- B. In the GuardDuty administrator account, add the company's existing AWS accounts to GuardDuty as members. In the GuardDuty administrator account, create an Amazon EventBridge rule with an event pattern to match GuardDuty events and to forward matching events to the SNS topic.
- C. In the organization's management account, configure Amazon GuardDuty to add newly created AWS accounts by invitation and to send invitations to the existing AWS accounts. Create an AWS CloudFormation stack set that accepts the GuardDuty invitation and creates an Amazon EventBridge rule. Configure the rule with an event pattern to match GuardDuty events and to forward matching events to the SNS topic.
- D. GuardDuty events and to forward matching events to the SNS topic.
- E. Configure the CloudFormation stack set to deploy into all AWS accounts in the organization.
- F. In the organization's management account, create an AWS CloudTrail organization trail. Activate the organization trail in all AWS accounts in the organization.
- G. Create an SCP that enables VPC Flow Logs in each account in the organization.
- H. Configure AWS Security Hub for the organization. Create an Amazon EventBridge rule with an event pattern to match Security Hub events and to forward matching events to the SNS topic.
- I. In the organization's management account, configure an AWS account as the AWS CloudTrail administrator account. In the CloudTrail administrator account, create a CloudTrail organization trail. Add the company's existing AWS accounts to the organization trail. Create an SCP that enables VPC Flow Logs in each account in the organization.
- J. Configure AWS Security Hub for the organization.
- K. Create an Amazon EventBridge rule with an event pattern to match Security Hub events and to forward matching events to the SNS topic.

Answer: B

Explanation:

It allows the company to detect potentially compromised EC2 instances, suspicious network activity, and unusual API activity in its existing AWS accounts and in any AWS accounts that the company creates in the future using Amazon GuardDuty. It also provides a solution for automatically adding future AWS accounts to GuardDuty by configuring GuardDuty to add newly created AWS accounts by invitation and to send invitations to the existing AWS accounts.

NEW QUESTION 2

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 3

A company deploys a web application on Amazon EC2 instances that are behind an Application Load Balancer (ALB). The company stores the application code in an AWS CodeCommit repository. When code is merged to the main branch, an AWS Lambda function invokes an AWS CodeBuild project. The CodeBuild project packages the code, stores the packaged code in AWS CodeArtifact, and invokes AWS Systems Manager Run Command to deploy the packaged code to the EC2 instances. Previous deployments have resulted in defects, EC2 instances that are not running the latest version of the packaged code, and inconsistencies between instances. Which combination of actions should a DevOps engineer take to implement a more reliable deployment solution? (Select TWO.)

- A. Create a pipeline in AWS CodePipeline that uses the CodeCommit repository as a source provider.
- B. Configure pipeline stages that run the CodeBuild project in parallel to build and test the application.
- C. In the pipeline, pass the CodeBuild project output artifact to an AWS CodeDeploy action.
- D. Create a pipeline in AWS CodePipeline that uses the CodeCommit repository as a source provider.
- E. Create separate pipeline stages that run a CodeBuild project to build and then test the application.
- F. In the pipeline, pass the CodeBuild project output artifact to an AWS CodeDeploy action.
- G. Create an AWS CodeDeploy application and a deployment group to deploy the packaged code to the EC2 instances.

- H. Configure the ALB for the deployment group.
- I. Create individual Lambda functions that use AWS CodeDeploy instead of Systems Manager to run build, test, and deploy actions.
- J. Create an Amazon S3 bucket
- K. Modify the CodeBuild project to store the packages in the S3 bucket instead of in CodeArtifact
- L. Use deploy actions in CodeDeploy to deploy the artifact to the EC2 instances.

Answer: AC

Explanation:

To implement a more reliable deployment solution, a DevOps engineer should take the following actions:

? Create a pipeline in AWS CodePipeline that uses the CodeCommit repository as a source provider. Configure pipeline stages that run the CodeBuild project in parallel to build and test the application. In the pipeline, pass the CodeBuild project output artifact to an AWS CodeDeploy action. This action will improve the deployment reliability by automating the entire process from code commit to deployment, reducing human errors and inconsistencies. By running the build and test stages in parallel, the pipeline can also speed up the delivery time and provide faster feedback. By using CodeDeploy as the deployment action, the pipeline can leverage the features of CodeDeploy, such as traffic shifting, health checks, rollback, and deployment configuration¹²³

? Create an AWS CodeDeploy application and a deployment group to deploy the packaged code to the EC2 instances. Configure the ALB for the deployment group. This action will improve the deployment reliability by using CodeDeploy to orchestrate the deployment across multiple EC2 instances behind an ALB. CodeDeploy can perform blue/green deployments or in-place deployments with traffic shifting, which can minimize downtime and reduce risks. CodeDeploy can also monitor the health of the instances during and after the deployment, and automatically roll back if any issues are detected. By configuring the ALB for the deployment group, CodeDeploy can register and deregister instances from the load balancer as needed, ensuring that only healthy instances receive traffic⁴⁵

The other options are not correct because they do not improve the deployment reliability or follow best practices. Creating separate pipeline stages that run a CodeBuild project to build and then test the application is not a good option because it will increase the pipeline execution time and delay the feedback loop. Creating individual Lambda functions that use CodeDeploy instead of Systems Manager to run build, test, and deploy actions is not a valid option because it will add unnecessary complexity and cost to the solution. Lambda functions are not designed for long-running tasks such as building or deploying applications. Creating an Amazon S3 bucket and modifying the CodeBuild project to store the packages in the S3 bucket instead of in CodeArtifact is not a necessary option because it will not affect the deployment reliability. CodeArtifact is a secure, scalable, and cost-effective package management service that can store and share software packages for application development⁶⁷

References:

- ? 1: What is AWS CodePipeline? - AWS CodePipeline
- ? 2: Create a pipeline in AWS CodePipeline - AWS CodePipeline
- ? 3: Deploy an application with AWS CodeDeploy - AWS CodePipeline
- ? 4: What is AWS CodeDeploy? - AWS CodeDeploy
- ? 5: Configure an Application Load Balancer for your blue/green deployments - AWS CodeDeploy
- ? 6: What is AWS Lambda? - AWS Lambda
- ? 7: What is AWS CodeArtifact? - AWS CodeArtifact

NEW QUESTION 4

A company wants to set up a continuous delivery pipeline. The company stores application code in a private GitHub repository. The company needs to deploy the application components to Amazon Elastic Container Service (Amazon ECS), Amazon EC2, and AWS Lambda. The pipeline must support manual approval actions.

Which solution will meet these requirements?

- A. Use AWS CodePipeline with Amazon EC
- B. Amazon EC2, and Lambda as deploy providers.
- C. Use AWS CodePipeline with AWS CodeDeploy as the deploy provider.
- D. Use AWS CodePipeline with AWS Elastic Beanstalk as the deploy provider.
- E. Use AWS CodeDeploy with GitHub integration to deploy the application.

Answer: B

Explanation:

<https://docs.aws.amazon.com/codedeploy/latest/userguide/deployment-steps.html>

NEW QUESTION 5

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 6

A production account has a requirement that any Amazon EC2 instance that has been logged in to manually must be terminated within 24 hours. All applications in the production account are using Auto Scaling groups with the Amazon CloudWatch Logs agent configured.
How can this process be automated?

- A. Create a CloudWatch Logs subscription to an AWS Step Functions applicatio
- B. Configure an AWS Lambda function to add a tag to the EC2 instance that produced the login event and mark the instance to be decommissioned
- C. Create an Amazon EventBridge rule to invoke a second Lambda function once a day that will terminate all instances with this tag.
- D. Create an Amazon CloudWatch alarm that will be invoked by the login event
- E. Send the notification to an Amazon Simple Notification Service (Amazon SNS) topic that the operations team is subscribed to, and have them terminate the EC2 instance within 24 hours.
- F. Create an Amazon CloudWatch alarm that will be invoked by the login event
- G. Configure the alarm to send to an Amazon Simple Queue Service (Amazon SQS) queue
- H. Use a group of worker instances to process messages from the queue, which then schedules an Amazon EventBridge rule to be invoked.
- I. Create a CloudWatch Logs subscription to an AWS Lambda function
- J. Configure the function to add a tag to the EC2 instance that produced the login event and mark the instance to be decommissioned
- K. Create an Amazon EventBridge rule to invoke a daily Lambda function that terminates all instances with this tag.

Answer: D

Explanation:

"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 AWS 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." See <https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/Subscriptions.html>

NEW QUESTION 7

A company recently launched multiple applications that use Application Load Balancers. Application response time often slows down when the applications experience problems. A DevOps engineer needs to implement a monitoring solution that alerts the company when the applications begin to perform slowly. The DevOps engineer creates an Amazon Simple Notification Service (Amazon SNS) topic and subscribes the company's email address to the topic. What should the DevOps engineer do next to meet the requirements?

- A. Create an Amazon EventBridge rule that invokes an AWS Lambda function to query the applications on a 5-minute interval. Configure the Lambda function to publish a notification to the SNS topic when the applications return errors.
- B. Create an Amazon CloudWatch Synthetics canary that runs a custom script to query the applications on a 5-minute interval.
- C. Configure the canary to use the SNS topic when the applications return errors.
- D. Create an Amazon CloudWatch alarm that uses the AWS/ApplicationELB namespace RequestCountPerTarget metric. Configure the CloudWatch alarm to send a notification when the number of connections becomes greater than the configured number of threads that the application supports. Configure the CloudWatch alarm to use the SNS topic.
- E. Create an Amazon CloudWatch alarm that uses the AWS/ApplicationELB namespace RequestCountPerTarget metric. Configure the CloudWatch alarm to send a notification when the average response time becomes greater than the longest response time that the application supports. Configure the CloudWatch alarm to use the SNS topic.

Answer: B

Explanation:

? Option A is incorrect because creating an Amazon EventBridge rule that invokes an AWS Lambda function to query the applications on a 5-minute interval is not a valid solution. EventBridge rules can only trigger Lambda functions based on events, not on time intervals. Moreover, querying the applications on a 5-minute interval might incur unnecessary costs and network overhead, and might not detect performance issues in real time.

? Option B is correct because creating an Amazon CloudWatch Synthetics canary that runs a custom script to query the applications on a 5-minute interval is a valid solution. CloudWatch Synthetics canaries are configurable scripts that monitor endpoints and APIs by simulating customer behavior. Canaries can run as often as once per minute, and can measure the latency and availability of the applications. Canaries can also send notifications to an Amazon SNS topic when they detect errors or performance issues¹.

? Option C is incorrect because creating an Amazon CloudWatch alarm that uses the AWS/ApplicationELB namespace RequestCountPerTarget metric is not a valid solution. The RequestCountPerTarget metric measures the number of requests completed or connections made per target in a target group². This metric does not reflect the application response time, which is the requirement. Moreover, configuring the CloudWatch alarm to send a notification when the number of connections becomes greater than the configured number of threads that the application supports is not a valid way to measure the application performance, as it depends on the application design and implementation.

? Option D is incorrect because creating an Amazon CloudWatch alarm that uses the AWS/ApplicationELB namespace RequestCountPerTarget metric is not a valid solution, for the same reason as option C. The RequestCountPerTarget metric does not reflect the application response time, which is the requirement. Moreover, configuring the CloudWatch alarm to send a notification when the average response time becomes greater than the longest response time that the application supports is not a valid way to measure the application performance, as it does not account for variability or outliers in the response time distribution.

References:

? 1: Using synthetic monitoring

? 2: Application Load Balancer metrics

NEW QUESTION 8

A company's developers use Amazon EC2 instances as remote workstations. The company is concerned that users can create or modify EC2 security groups to allow unrestricted inbound access.

A DevOps engineer needs to develop a solution to detect when users create unrestricted security group rules. The solution must detect changes to security group rules in near real time, remove unrestricted rules, and send email notifications to the security team. The DevOps engineer has created an AWS Lambda function that checks for security group ID from input, removes rules that grant unrestricted access, and sends notifications through Amazon Simple Notification Service (Amazon SNS).

What should the DevOps engineer do next to meet the requirements?

- A. Configure the Lambda function to be invoked by the SNS topic
- B. Create an AWS CloudTrail subscription for the SNS topic
- C. Configure a subscription filter for security group modification events.
- D. Create an Amazon EventBridge scheduled rule to invoke the Lambda function
- E. Define a schedule pattern that runs the Lambda function every hour.
- F. Create an Amazon EventBridge event rule that has the default event bus as the source
- G. Define the rule's event pattern to match EC2 security group creation and modification event
- H. Configure the rule to invoke the Lambda function.
- I. Create an Amazon EventBridge custom event bus that subscribes to events from all AWS services
- J. Configure the Lambda function to be invoked by the custom event bus.

Answer: C

Explanation:

To meet the requirements, the DevOps engineer should create an Amazon EventBridge event rule that has the default event bus as the source. The rule's event pattern should match EC2 security group creation and modification events, and it should be configured to invoke the Lambda function. This solution will allow for near real-time detection of security group rule changes and will trigger the Lambda function to remove any unrestricted rules and send email notifications to the security team. <https://repost.aws/knowledge-center/monitor-security-group-changes-ec2>

NEW QUESTION 9

A company has multiple member accounts that are part of an organization in AWS Organizations. The security team needs to review every Amazon EC2 security group and their inbound and outbound rules. The security team wants to programmatically retrieve this information from the member accounts using an AWS Lambda function in the management account of the organization.

Which combination of access changes will meet these requirements? (Choose three.)

- A. Create a trust relationship that allows users in the member accounts to assume the management account IAM role.
- B. Create a trust relationship that allows users in the management account to assume the IAM roles of the member accounts.
- C. Create an IAM role in each member account that has access to the AmazonEC2ReadOnlyAccess managed policy.
- D. Create an IAM role in each member account to allow the sts:AssumeRole action against the management account IAM role's ARN.
- E. Create an IAM role in the management account that allows the sts:AssumeRole action against the member account IAM role's ARN.
- F. Create an IAM role in the management account that has access to the AmazonEC2ReadOnlyAccess managed policy.

Answer: BCE

Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/lambda-function-assume-iam-role/> <https://kreuzwerker.de/post/aws-multi-account-setups-reloaded>

NEW QUESTION 10

A DevOps engineer at a company is supporting an AWS environment in which all users use AWS IAM Identity Center (AWS Single Sign-On). The company wants to immediately disable credentials of any new IAM user and wants the security team to receive a notification.

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

- A. Create an Amazon EventBridge rule that reacts to an IAM CreateUser API call in AWS CloudTrail.
- B. Create an Amazon EventBridge rule that reacts to an IAM GetLoginProfile API call in AWS CloudTrail.
- C. Create an AWS Lambda function that is a target of the EventBridge rule
- D. Configure the Lambda function to disable any access keys and delete the login profiles that are associated with the IAM user.
- E. Create an AWS Lambda function that is a target of the EventBridge rule
- F. Configure the Lambda function to delete the login profiles that are associated with the IAM user.
- G. Create an Amazon Simple Notification Service (Amazon SNS) topic that is a target of the EventBridge rule
- H. Subscribe the security team's group email address to the topic.
- I. Create an Amazon Simple Queue Service (Amazon SQS) queue that is a target of the Lambda function
- J. Subscribe the security team's group email address to the queue.

Answer: ACE

NEW QUESTION 10

A company manages AWS accounts for application teams in AWS Control Tower. Individual application teams are responsible for securing their respective AWS accounts.

A DevOps engineer needs to enable Amazon GuardDuty for all AWS accounts in which the application teams have not already enabled GuardDuty. The DevOps engineer is using AWS CloudFormation StackSets from the AWS Control Tower management account.

How should the DevOps engineer configure the CloudFormation template to prevent failure during the StackSets deployment?

- A. Create a CloudFormation custom resource that invokes an AWS Lambda function
- B. Configure the Lambda function to conditionally enable GuardDuty if GuardDuty is not already enabled in the accounts.
- C. Use the Conditions section of the CloudFormation template to enable GuardDuty in accounts where GuardDuty is not already enabled.
- D. Use the CloudFormation Fn::GetAtt intrinsic function to check whether GuardDuty is already enabled. If GuardDuty is not already enabled use the Resources section of the CloudFormation template to enable GuardDuty.
- E. Use the CloudFormation Fn::GetAtt intrinsic function to check whether GuardDuty is already enabled. If GuardDuty is not already enabled use the Resources section of the CloudFormation template to enable GuardDuty.
- F. Manually discover the list of AWS account IDs where GuardDuty is not enabled. Use the CloudFormation Fn::ImportValue intrinsic function to import the list of account IDs into the CloudFormation template to skip deployment for the listed AWS accounts.

Answer: A

Explanation:

This solution will meet the requirements because it will use a CloudFormation custom resource to execute custom logic during the stack set operation. A custom resource is a resource that you define in your template and that is associated with an AWS Lambda function. The Lambda function runs whenever the custom resource is created, updated, or deleted, and can perform any actions that are supported by the AWS SDK. In this case, the Lambda function can use the GuardDuty API to check whether GuardDuty is already enabled in each target account, and if not, enable it. This way, the DevOps engineer can avoid deploying

the stack set to accounts that already have GuardDuty enabled, and prevent failure during the deployment.

NEW QUESTION 11

A company's application is currently deployed to a single AWS Region. Recently, the company opened a new office on a different continent. The users in the new office are experiencing high latency. The company's application runs on Amazon EC2 instances behind an Application Load Balancer (ALB) and uses Amazon DynamoDB as the database layer. The instances run in an EC2 Auto Scaling group across multiple Availability Zones. A DevOps engineer is tasked with minimizing application response times and improving availability for users in both Regions.

Which combination of actions should be taken to address the latency issues? (Choose three.)

- A. Create a new DynamoDB table in the new Region with cross-Region replication enabled.
- B. Create new ALB and Auto Scaling group global resources and configure the new ALB to direct traffic to the new Auto Scaling group.
- C. Create new ALB and Auto Scaling group resources in the new Region and configure the new ALB to direct traffic to the new Auto Scaling group.
- D. Create Amazon Route 53 records, health checks, and latency-based routing policies to route to the ALB.
- E. Create Amazon Route 53 aliases, health checks, and failover routing policies to route to the ALB.
- F. Convert the DynamoDB table to a global table.

Answer: CDF

Explanation:

C. Create new ALB and Auto Scaling group resources in the new Region and configure the new ALB to direct traffic to the new Auto Scaling group. This will allow users in the new Region to access the application with lower latency by reducing the network hops between the user and the application servers.

* D. Create Amazon Route 53 records, health checks, and latency-based routing policies to route to the ALB. This will enable Route 53 to route user traffic to the nearest healthy ALB, based on the latency between the user and the ALBs.

* F. Convert the DynamoDB table to a global table. This will enable reads and writes to the table in both Regions with low latency, improving the overall response time of the application

NEW QUESTION 13

A company deploys its corporate infrastructure on AWS across multiple AWS Regions and Availability Zones. The infrastructure is deployed on Amazon EC2 instances and connects with AWS IoT Greengrass devices. The company deploys additional resources on on-premises servers that are located in the corporate headquarters.

The company wants to reduce the overhead involved in maintaining and updating its resources. The company's DevOps team plans to use AWS Systems Manager to implement automated management and application of patches. The DevOps team confirms that Systems Manager is available in the Regions that the resources are deployed in. Systems Manager also is available in a Region near the corporate headquarters.

Which combination of steps must the DevOps team take to implement automated patch and configuration management across the company's EC2 instances IoT devices and on-premises infrastructure? (Select THREE.)

- A. Apply tags to all the EC2 instances
- B. AWS IoT Greengrass devices, and on-premises servers
- C. Use Systems Manager Session Manager to push patches to all the tagged devices.
- D. Use Systems Manager Run Command to schedule patching for the EC2 instances AWS IoT Greengrass devices and on-premises servers.
- E. Use Systems Manager Patch Manager to schedule patching for the EC2 instances AWS IoT Greengrass devices and on-premises servers as a Systems Manager maintenance window task.
- F. Configure Amazon EventBridge to monitor Systems Manager Patch Manager for updates to patch baseline
- G. Associate Systems Manager Run Command with the event to initiate a patch action for all EC2 instances AWS IoT Greengrass devices and on-premises servers.
- H. Create an IAM instance profile for Systems Manager. Attach the instance profile to all the EC2 instances in the AWS account
- I. For the AWS IoT Greengrass devices and on-premises servers create an IAM service role for Systems Manager.
- J. Generate a managed-instance activation. Use the Activation Code and Activation ID to install Systems Manager Agent (SSM Agent) on each server in the on-premises environment. Update the AWS IoT Greengrass IAM token exchange role. Use the role to deploy SSM Agent on all the IoT devices.

Answer: CEF

Explanation:

https://aws.amazon.com/blogs/mt/how-to-centrally-manage-aws-iot-greengrass-devices-using-aws-systems-manager/?force_isolation=true

NEW QUESTION 14

A company has deployed a critical application in two AWS Regions. The application uses an Application Load Balancer (ALB) in both Regions. The company has Amazon Route 53 alias DNS records for both ALBs.

The company uses Amazon Route 53 Application Recovery Controller to ensure that the application can fail over between the two Regions. The Route 53 ARC configuration includes a routing control for both Regions. The company uses Route 53 ARC to perform quarterly disaster recovery (DR) tests.

During the most recent DR test, a DevOps engineer accidentally turned off both routing controls. The company needs to ensure that at least one routing control is turned on at all times.

Which solution will meet these requirements?

- A. In Route 53 AR
- B. create a new assertion safety rule
- C. Apply the assertion safety rule to the two routing controls
- D. Configure the rule with the ATLEAST type with a threshold of 1.
- E. In Route 53 ARC, create a new gating safety rule
- F. Apply the assertion safety rule to the two routing controls
- G. Configure the rule with the OR type with a threshold of 1.
- H. In Route 53 ARC, create a new resource set
- I. Configure the resource set with an AWS: Route53: HealthCheck resource type
- J. Specify the ARNs of the two routing controls as the target resource
- K. Create a new readiness check for the resource set.
- L. In Route 53 ARC, create a new resource set
- M. Configure the resource set with an AWS: Route53RecoveryReadiness: DNSTargetResource resource type
- N. Add the domain names of the two Route 53 alias DNS records as the target resource
- O. Create a new readiness check for the resource set.

Answer: A

Explanation:

The correct solution is to create a new assertion safety rule in Route 53 ARC and apply it to the two routing controls. An assertion safety rule is a type of safety rule that ensures that a minimum number of routing controls are always enabled. The ATLEAST type of assertion safety rule specifies the minimum number of routing controls that must be enabled for the rule to evaluate as healthy. By setting the threshold to 1, the rule ensures that at least one routing control is always turned on. This prevents the scenario where both routing controls are accidentally turned off and the application becomes unavailable in both Regions.

The other solutions are incorrect because they do not use safety rules to prevent both routing controls from being turned off. A gating safety rule is a type of safety rule that prevents routing control state changes that violate the rule logic. The OR type of gating safety rule specifies that one or more routing controls must be enabled for the rule to evaluate as healthy. However, this rule does not prevent a user from turning off both routing controls manually. A resource set is a collection of resources that are tested for readiness by Route 53 ARC. A readiness check is a test that verifies that all the resources in a resource set are operational. However, these concepts are not related to routing control states or safety rules. Therefore, creating a new resource set and a new readiness check will not ensure that at least one routing control is turned on at all times. References:

- ? Routing control in Amazon Route 53 Application Recovery Controller
- ? Viewing and updating routing control states in Route 53 ARC
- ? Creating a control panel in Route 53 ARC
- ? Creating safety rules in Route 53 ARC

NEW QUESTION 16

A DevOps engineer needs to back up sensitive Amazon S3 objects that are stored within an S3 bucket with a private bucket policy using S3 cross-Region replication functionality. The objects need to be copied to a target bucket in a different AWS Region and account.

Which combination of actions should be performed to enable this replication? (Choose three.)

- A. Create a replication IAM role in the source account
- B. Create a replication IAM role in the target account.
- C. Add statements to the source bucket policy allowing the replication IAM role to replicate objects.
- D. Add statements to the target bucket policy allowing the replication IAM role to replicate objects.
- E. Create a replication rule in the source bucket to enable the replication.
- F. Create a replication rule in the target bucket to enable the replication.

Answer: ADE

Explanation:

S3 cross-Region replication (CRR) automatically replicates data between buckets across different AWS Regions. To enable CRR, you need to add a replication configuration to your source bucket that specifies the destination bucket, the IAM role, and the encryption type (optional). You also need to grant permissions to the IAM role to perform replication actions on both the source and destination buckets. Additionally, you can choose the destination storage class and enable additional replication options such as S3 Replication Time Control (S3 RTC) or S3 Batch Replication. <https://medium.com/cloud-techies/s3-same-region-replication-srr-and-cross-region-replication-crr-34d446806bab> <https://aws.amazon.com/getting-started/hands-on/replicate-data-using-amazon-s3-replication/> <https://docs.aws.amazon.com/AmazonS3/latest/userguide/replication.html>

NEW QUESTION 19

A company's application development team uses Linux-based Amazon EC2 instances as bastion hosts. Inbound SSH access to the bastion hosts is restricted to specific IP addresses, as defined in the associated security groups. The company's security team wants to receive a notification if the security group rules are modified to allow SSH access from any IP address.

What should a DevOps engineer do to meet this requirement?

- A. Create an Amazon EventBridge rule with a source of aws.cloudtrail and the event name AuthorizeSecurityGroupIngress
- B. Define an Amazon Simple Notification Service (Amazon SNS) topic as the target.
- C. Enable Amazon GuardDuty and check the findings for security groups in AWS Security Hub
- D. Configure an Amazon EventBridge rule with a custom pattern that matches GuardDuty events with an output of NON_COMPLIANT
- E. Define an Amazon Simple Notification Service (Amazon SNS) topic as the target.
- F. Create an AWS Config rule by using the restricted-ssh managed rule to check whether security groups disallow unrestricted incoming SSH traffic
- G. Configure automatic remediation to publish a message to an Amazon Simple Notification Service (Amazon SNS) topic.
- H. Enable Amazon Inspector
- I. Include the Common Vulnerabilities and Exposures-1.1 rules package to check the security groups that are associated with the bastion host
- J. Configure Amazon Inspector to publish a message to an Amazon Simple Notification Service (Amazon SNS) topic.

Answer: A

Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/monitor-security-group-changes-ec2/>

NEW QUESTION 20

A DevOps team is merging code revisions for an application that uses an Amazon RDS Multi-AZ DB cluster for its production database. The DevOps team uses continuous integration to periodically verify that the application works. The DevOps team needs to test the changes before the changes are deployed to the production database.

Which solution will meet these requirements?

- A. Use a buildspec file in AWS CodeBuild to restore the DB cluster from a snapshot of the production database run integration tests, and drop the restored database after verification.
- B. Deploy the application to production
- C. Configure an audit log of data control language (DCL) operations to capture database activities to perform if verification fails.
- D. Create a snapshot of the DB cluster before deploying the application Use the Update requires Replacement property on the DB instance in AWS CloudFormation to deploy the application and apply the changes.
- E. Ensure that the DB cluster is a Multi-AZ deployment
- F. Deploy the application with the update
- G. Fail over to the standby instance if verification fails.

Answer: A

Explanation:

This solution will meet the requirements because it will create a temporary copy of the production database using a snapshot, run the integration tests on the copy, and delete the copy after the tests are done. This way, the production database will not be affected by the code revisions, and the DevOps team can test the changes before deploying them to production. A buildspec file is a YAML file that contains the commands and settings that CodeBuild uses to run a build¹. The buildspec file can specify the steps to restore the DB cluster from a snapshot, run the integration tests, and drop the restored database².

NEW QUESTION 23

A company's development team uses AWS CloudFormation to deploy its application resources. The team must use for any changes to the environment. The team cannot use the AWS Management Console or the AWS CLI to make manual changes directly.

The team uses a developer IAM role to access the environment. The role is configured with the AdministratorAccess managed policy. The company has created a new CloudFormationDeployment IAM role that has the following policy.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "elasticloadbalancing:*",
        "lambda:*",
        "dynamodb:*"
      ],
      "Resource": "*"
    }
  ]
}
```

The company wants to ensure that only CloudFormation can use the new role. The development team cannot make any manual changes to the deployed resources. Which combination of steps meets these requirements? (Select THREE.)

- A. Remove the AdministratorAccess policy
- B. Assign the ReadOnlyAccess managed IAM policy to the developer role
- C. Instruct the developers to use the CloudFormationDeployment role as a CloudFormation service role when the developers deploy new stacks.
- D. Update the trust of CloudFormationDeployment role to allow the developer IAM role to assume the CloudFormationDeployment role.
- E. Configure the IAM to be able to get and pass the CloudFormationDeployment role if cloudformation actions for resources,
- F. Update the trust of the CloudFormationDeployment role to allow the cloudformation.amazonaws.com AWS principal to perform the iam:AssumeRole action
- G. Remove the AdministratorAccess policy
- H. Assign the ReadOnlyAccess managed IAM policy to the developer role. Instruct the developers to assume the CloudFormationDeployment role when they deploy new stacks
- I. Add an IAM policy to CloudFormationDeployment to allow cloudformation:* on all resources and add a policy that allows the iam:PassRole action for ARN of CloudFormationDeployment if iam:PassedToService equals cloudformation.amazonaws.com

Answer: ADF

Explanation:

A comprehensive and detailed explanation is:

? Option A is correct because removing the AdministratorAccess policy and assigning the ReadOnlyAccess managed IAM policy to the developer role is a valid way to prevent the developers from making any manual changes to the deployed resources. The AdministratorAccess policy grants full access to all AWS resources and actions, which is not necessary for the developers. The ReadOnlyAccess policy grants read-only access to most AWS resources and actions, which is sufficient for the developers to view the status of their stacks. Instructing the developers to use the CloudFormationDeployment role as a CloudFormation service role when they deploy new stacks is also a valid way to ensure that only CloudFormation can use the new role. A CloudFormation service role is an IAM role that allows CloudFormation to make calls to resources in a stack on behalf of the user¹. The user can specify a service role when they create or update a stack, and CloudFormation will use that role's credentials for all operations that are performed on that stack¹.

? Option B is incorrect because updating the trust of CloudFormationDeployment role to allow the developer IAM role to assume the CloudFormationDeployment role is not a valid solution. This would allow the developers to manually assume the CloudFormationDeployment role and perform actions on the deployed resources, which is not what the company wants. The trust of CloudFormationDeployment role should only allow the cloudformation.amazonaws.com AWS principal to assume the role, as in option D.

? Option C is incorrect because configuring the IAM user to be able to get and pass the CloudFormationDeployment role if cloudformation actions for resources is not a valid solution. This would allow the developers to manually pass the CloudFormationDeployment role to other services or resources, which is not what the company wants. The IAM user should only be able to pass the CloudFormationDeployment role as a service role when they create or update a stack with CloudFormation, as in option A.

? Option D is correct because updating the trust of CloudFormationDeployment role to allow the cloudformation.amazonaws.com AWS principal to perform the iam:AssumeRole action is a valid solution. This allows CloudFormation to assume the CloudFormationDeployment role and access resources in other services on behalf of the user². The trust policy of an IAM role defines which entities can assume the role². By specifying cloudformation.amazonaws.com as the principal, you grant permission only to CloudFormation to assume this role.

? Option E is incorrect because instructing the developers to assume the CloudFormationDeployment role when they deploy new stacks is not a valid solution. This would allow the developers to manually assume the CloudFormationDeployment role and perform actions on the deployed resources, which is not what the company wants. The developers should only use the CloudFormationDeployment role as a service role when they deploy new stacks with CloudFormation, as in option A.

? Option F is correct because adding an IAM policy to CloudFormationDeployment that allows cloudformation:* on all resources and adding a policy that allows the iam:PassRole action for ARN of CloudFormationDeployment if iam:PassedToService equals cloudformation.amazonaws.com are valid solutions. The first policy grants permission for CloudFormationDeployment to perform any action with any resource using cloudformation.amazonaws.com as a service principal³. The second policy grants permission for passing this role only if it is passed by cloudformation.amazonaws.com as a service principal⁴. This ensures that only CloudFormation can use this role.

References:

- ? 1: AWS CloudFormation service roles
- ? 2: How to use trust policies with IAM roles
- ? 3: AWS::IAM::Policy
- ? 4: IAM: Pass an IAM role to a specific AWS service

NEW QUESTION 24

An ecommerce company is receiving reports that its order history page is experiencing delays in reflecting the processing status of orders. The order processing system consists of an AWS Lambda function that uses reserved concurrency. The Lambda function processes order messages from an Amazon Simple Queue Service (Amazon SQS) queue and inserts processed orders into an Amazon DynamoDB table. The DynamoDB table has auto scaling enabled for read and write capacity.

Which actions should a DevOps engineer take to resolve this delay? (Choose two.)

- A. Check the ApproximateAgeOfOldestMessage metric for the SQS queue
- B. Increase the Lambda function concurrency limit.
- C. Check the ApproximateAgeOfOldestMessage metric for the SQS queue. Configure a redrive policy on the SQS queue.
- D. Check the NumberOfMessagesSent metric for the SQS queue
- E. Increase the SQS queue visibility timeout.
- F. Check the WriteThrottleEvents metric for the DynamoDB table
- G. Increase the maximum write capacity units (WCUs) for the table's scaling policy.
- H. Check the Throttles metric for the Lambda function
- I. Increase the Lambda function timeout.

Answer: AD

Explanation:

A: If the ApproximateAgeOfOldestMessages indicate that orders are remaining in the SQS queue for longer than expected, the reserved concurrency limit may be set too small to keep up with the number of orders entering the queue and is being throttled. D: The DynamoDB table is using Auto Scaling. With Auto Scaling, you create a scaling policy that specifies whether you want to scale read capacity or write capacity (or both), and the minimum and maximum provisioned capacity unit settings for the table. The ThrottledWriteRequests metric will indicate if there is a throttling issue on the DynamoDB table, which can be resolved by increasing the maximum write capacity units for the table's Auto Scaling policy. <https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/AutoScaling.html>

NEW QUESTION 29

A company is running an application on Amazon EC2 instances in an Auto Scaling group. Recently an issue occurred that prevented EC2 instances from launching successfully and it took several hours for the support team to discover the issue. The support team wants to be notified by email whenever an EC2 instance does not start successfully.

Which action will accomplish this?

- A. Add a health check to the Auto Scaling group to invoke an AWS Lambda function whenever an instance status is impaired.
- B. Configure the Auto Scaling group to send a notification to an Amazon SNS topic whenever a failed instance launch occurs.
- C. Create an Amazon CloudWatch alarm that invokes an AWS Lambda function when a failed AttachInstances Auto Scaling API call is made.
- D. Create a status check alarm on Amazon EC2 to send a notification to an Amazon SNS topic whenever a status check fail occurs.

Answer: B

Explanation:

<https://docs.aws.amazon.com/autoscaling/ec2/userguide/ASGettingNotifications.html#auto-scaling-sns-notifications>

NEW QUESTION 30

An IT team has built an AWS CloudFormation template so others in the company can quickly and reliably deploy and terminate an application. The template creates an Amazon EC2 instance with a user data script to install the application and an Amazon S3 bucket that the application uses to serve static webpages while it is running.

All resources should be removed when the CloudFormation stack is deleted. However, the team observes that CloudFormation reports an error during stack deletion, and the S3 bucket created by the stack is not deleted.

How can the team resolve the error in the MOST efficient manner to ensure that all resources are deleted without errors?

- A. Add a DeletionPolicy attribute to the S3 bucket resource, with the value Delete forcing the bucket to be removed when the stack is deleted.
- B. Add a custom resource with an AWS Lambda function with the DependsOn attribute specifying the S3 bucket, and an IAM role
- C. Write the Lambda function to delete all objects from the bucket when RequestType is Delete.
- D. Identify the resource that was not deleted
- E. Manually empty the S3 bucket and then delete it.
- F. Replace the EC2 and S3 bucket resources with a single AWS OpsWorks Stacks resource
- G. Define a custom recipe for the stack to create and delete the EC2 instance and the S3 bucket.

Answer: B

Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/cloudformation-s3-custom-resources/>

NEW QUESTION 32

A company has an application that is using a MySQL-compatible Amazon Aurora Multi-AZ DB cluster as the database. A cross-Region read replica has been created for disaster recovery purposes. A DevOps engineer wants to automate the promotion of the replica so it becomes the primary database instance in the event of a failure.

Which solution will accomplish this?

- A. Configure a latency-based Amazon Route 53 CNAME with health checks so it points to both the primary and replica endpoint
- B. Subscribe an Amazon SNS topic to Amazon RDS failure notifications from AWS CloudTrail and use that topic to invoke an AWS Lambda function that will promote the replica instance as the primary.
- C. Create an Aurora custom endpoint to point to the primary database instance

- D. Configure the application to use this endpoint
- E. Configure AWS CloudTrail to run an AWS Lambda function to promote the replica instance and modify the custom endpoint to point to the newly promoted instance.
- F. Create an AWS Lambda function to modify the application's AWS CloudFormation template to promote the replica, apply the template to update the stack, and point the application to the newly promoted instance
- G. Create an Amazon CloudWatch alarm to invoke this Lambda function after the failure event occurs.
- H. Store the Aurora endpoint in AWS Systems Manager Parameter Store
- I. Create an Amazon EventBridge event that detects the database failure and runs an AWS Lambda function to promote the replica instance and update the endpoint URL stored in AWS Systems Manager Parameter Store
- J. Code the application to reload the endpoint from Parameter Store if a database connection fails.

Answer: D

Explanation:

EventBridge is needed to detect the database failure. Lambda is needed to promote the replica as it's in another Region (manual promotion, otherwise). Storing and updating the endpoint in Parameter store is important in updating the application. Look at High Availability section of Aurora FAQ:
<https://aws.amazon.com/rds/aurora/faqs/>

NEW QUESTION 37

A company uses an organization in AWS Organizations that has all features enabled. The company uses AWS Backup in a primary account and uses an AWS Key Management Service (AWS KMS) key to encrypt the backups.

The company needs to automate a cross-account backup of the resources that AWS Backup backs up in the primary account. The company configures cross-account backup in the Organizations management account. The company creates a new AWS account in the organization and configures an AWS Backup backup vault in the new account. The company creates a KMS key in the new account to encrypt the backups. Finally, the company configures a new backup plan in the primary account. The destination for the new backup plan is the backup vault in the new account.

When the AWS Backup job in the primary account is invoked, the job creates backups in the primary account. However, the backups are not copied to the new account's backup vault.

Which combination of steps must the company take so that backups can be copied to the new account's backup vault? (Select TWO.)

- A. Edit the backup vault access policy in the new account to allow access to the primary account.
- B. Edit the backup vault access policy in the primary account to allow access to the new account.
- C. Edit the backup vault access policy in the primary account to allow access to the KMS key in the new account.
- D. Edit the key policy of the KMS key in the primary account to share the key with the new account.
- E. Edit the key policy of the KMS key in the new account to share the key with the primary account.

Answer: AE

Explanation:

To enable cross-account backup, the company needs to grant permissions to both the backup vault and the KMS key in the destination account. The backup vault access policy in the destination account must allow the primary account to copy backups into the vault. The key policy of the KMS key in the destination account must allow the primary account to use the key to encrypt and decrypt the backups. These steps are described in the AWS documentation¹². Therefore, the correct answer is A and E.

References:

? 1: Creating backup copies across AWS accounts - AWS Backup

? 2: Using AWS Backup with AWS Organizations - AWS Backup

NEW QUESTION 41

A company is hosting a web application in an AWS Region. For disaster recovery purposes, a second region is being used as a standby. Disaster recovery requirements state that session data must be replicated between regions in near-real time and 1% of requests should route to the secondary region to continuously verify system functionality. Additionally, if there is a disruption in service in the main region, traffic should be automatically routed to the secondary region, and the secondary region must be able to scale up to handle all traffic.

How should a DevOps engineer meet these requirements?

- A. In both regions, deploy the application on AWS Elastic Beanstalk and use Amazon DynamoDB global tables for session data
- B. Use an Amazon Route 53 weighted routing policy with health checks to distribute the traffic across the regions.
- C. In both regions, launch the application in Auto Scaling groups and use DynamoDB for session data
- D. Use a Route 53 failover routing policy with health checks to distribute the traffic across the regions.
- E. In both regions, deploy the application in AWS Lambda, exposed by Amazon API Gateway, and use Amazon RDS for PostgreSQL with cross-region replication for session data
- F. Deploy the web application with client-side logic to call the API Gateway directly.
- G. In both regions, launch the application in Auto Scaling groups and use DynamoDB global tables for session data
- H. Enable an Amazon CloudFront weighted distribution across region
- I. Point the Amazon Route 53 DNS record at the CloudFront distribution.

Answer: D

NEW QUESTION 45

A company uses AWS CodeArtifact to centrally store Python packages. The CodeArtifact repository is configured with the following repository policy.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Action": [
        "codeartifact:DescribePackageVersion",
        "codeartifact:DescribeRepository",
        "codeartifact:GetPackageVersionReadme",
        "codeartifact:GetRepositoryEndpoint",
        "codeartifact:ListPackageVersionAssets",
        "codeartifact:ListPackageVersionDependencies",
        "codeartifact:ListPackageVersions",
        "codeartifact:ListPackages",
        "codeartifact:ReadFromRepository"
      ],
      "Effect": "Allow",
      "Resource": "*",
      "Principal": "*",
      "Condition": {
        "StringEquals": {
          "aws:PrincipalOrgID": [
            "o-xxxxxxxxxxxx"
          ]
        }
      }
    }
  ]
}
```

A development team is building a new project in an account that is in an organization in AWS Organizations. The development team wants to use a Python library that has already been stored in the CodeArtifact repository in the organization. The development team uses AWS CodePipeline and AWS CodeBuild to build the new application. The CodeBuild job that the development team uses to build the application is configured to run in a VPC. Because of compliance requirements the VPC has no internet connectivity.

The development team creates the VPC endpoints for CodeArtifact and updates the CodeBuild buildspec yaml file. However, the development team cannot download the Python library from the repository.

Which combination of steps should a DevOps engineer take so that the development team can use Code Artifact? (Select TWO.)

- A. Create an Amazon S3 gateway endpoint. Update the route tables for the subnets that are running the CodeBuild job.
- B. Update the repository policy's Principal statement to include the ARN of the role that the CodeBuild project uses.
- C. Share the CodeArtifact repository with the organization by using AWS Resource Access Manager (AWS RAM).
- D. Update the role that the CodeBuild project uses so that the role has sufficient permissions to use the CodeArtifact repository.
- E. Specify the account that hosts the repository as the delegated administrator for CodeArtifact in the organization.

Answer: AD

Explanation:

"AWS CodeArtifact operates in multiple Availability Zones and stores artifact data and metadata in Amazon S3 and Amazon DynamoDB. Your encrypted data is redundantly stored across multiple facilities and multiple devices in each facility, making it highly available and highly durable."

<https://aws.amazon.com/codeartifact/features/> With no internet connectivity, a gateway endpoint becomes necessary to access S3.

NEW QUESTION 49

An ecommerce company has chosen AWS to host its new platform. The company's DevOps team has started building an AWS Control Tower landing zone. The DevOps team has set the identity store within AWS IAM Identity Center (AWS Single Sign-On) to external identity provider (IdP) and has configured SAML 2.0. The DevOps team wants a robust permission model that applies the principle of least privilege. The model must allow the team to build and manage only the team's own resources.

Which combination of steps will meet these requirements? (Choose three.)

- A. Create IAM policies that include the required permission
- B. Include the aws:PrincipalTag condition key.
- C. Create permission set
- D. Attach an inline policy that includes the required permissions and uses the aws:PrincipalTag condition key to scope the permissions.
- E. Create a group in the Id
- F. Place users in the group
- G. Assign the group to accounts and the permission sets in IAM Identity Center.
- H. Create a group in the Id
- I. Place users in the group
- J. Assign the group to OUs and IAM policies.
- K. Enable attributes for access control in IAM Identity Center
- L. Apply tags to user
- M. Map the tags as key-value pairs.
- N. Enable attributes for access control in IAM Identity Center
- O. Map attributes from the IdP as key-value pairs.

Answer: BCF

Explanation:

Using the principalTag in the Permission Set inline policy a logged in user belonging to a specific AD group in the IDP can be permitted access to perform operations on certain resources if their group matches the group used in the PrincipleTag. Basically you are narrowing the scope of privileges assigned via Permission policies conditionally based on whether the logged in user belongs to a specific AD Group in IDP. The mapping of the AD group to the request attributes can be done using SSO attributes where we can pass other attributes like the SAML token as well.
<https://docs.aws.amazon.com/singlesignon/latest/userguide/abac.html>

NEW QUESTION 52

A development team wants to use AWS CloudFormation stacks to deploy an application. However, the developer IAM role does not have the required permissions to provision the resources that are specified in the AWS CloudFormation template. A DevOps engineer needs to implement a solution that allows the developers to deploy the stacks. The solution must follow the principle of least privilege. Which solution will meet these requirements?

- A. Create an IAM policy that allows the developers to provision the required resource
- B. Attach the policy to the developer IAM role.
- C. Create an IAM policy that allows full access to AWS CloudFormation
- D. Attach the policy to the developer IAM role.
- E. Create an AWS CloudFormation service role that has the required permission
- F. Grant the developer IAM role a cloudformation:* action
- G. Use the new service role during stack deployments.
- H. Create an AWS CloudFormation service role that has the required permission
- I. Grant the developer IAM role the iam:PassRole permission
- J. Use the new service role during stack deployments.

Answer: D

Explanation:

<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/using-iam-servicerole.html>

NEW QUESTION 54

A company has a single AWS account that runs hundreds of Amazon EC2 instances in a single AWS Region. New EC2 instances are launched and terminated each hour in the account. The account also includes existing EC2 instances that have been running for longer than a week.

The company's security policy requires all running EC2 instances to use an EC2 instance profile. If an EC2 instance does not have an instance profile attached, the EC2 instance must use a default instance profile that has no IAM permissions assigned.

A DevOps engineer reviews the account and discovers EC2 instances that are running without an instance profile. During the review, the DevOps engineer also observes that new EC2 instances are being launched without an instance profile.

Which solution will ensure that an instance profile is attached to all existing and future EC2 instances in the Region?

- A. Configure an Amazon EventBridge rule that reacts to EC2 RunInstances API call
- B. Configure the rule to invoke an AWS Lambda function to attach the default instance profile to the EC2 instances.
- C. Configure the ec2-instance-profile-attached AWS Config managed rule with a trigger type of configuration change
- D. Configure an automatic remediation action that invokes an AWS Systems Manager Automation runbook to attach the default instance profile to the EC2 instances.
- E. Configure an Amazon EventBridge rule that reacts to EC2 StartInstances API call
- F. Configure the rule to invoke an AWS Systems Manager Automation runbook to attach the default instance profile to the EC2 instances.
- G. Configure the iam-role-managed-policy-check AWS Config managed rule with a trigger type of configuration change
- H. Configure an automatic remediation action that invokes an AWS Lambda function to attach the default instance profile to the EC2 instances.

Answer: B

Explanation:

<https://docs.aws.amazon.com/config/latest/developerguide/ec2-instance-profile-attached.html>

NEW QUESTION 55

An online retail company based in the United States plans to expand its operations to Europe and Asia in the next six months. Its product currently runs on Amazon EC2 instances behind an Application Load Balancer. The instances run in an Amazon EC2 Auto Scaling group across multiple Availability Zones. All data is stored in an Amazon Aurora database instance.

When the product is deployed in multiple regions, the company wants a single product catalog across all regions, but for compliance purposes, its customer information and purchases must be kept in each region.

How should the company meet these requirements with the LEAST amount of application changes?

- A. Use Amazon Redshift for the product catalog and Amazon DynamoDB tables for the customer information and purchases.
- B. Use Amazon DynamoDB global tables for the product catalog and regional tables for the customer information and purchases.
- C. Use Aurora with read replicas for the product catalog and additional local Aurora instances in each region for the customer information and purchases.
- D. Use Aurora for the product catalog and Amazon DynamoDB global tables for the customer information and purchases.

Answer: C

NEW QUESTION 56

A DevOps engineer is architecting a continuous development strategy for a company's software as a service (SaaS) web application running on AWS. For application and security reasons users subscribing to this application are distributed across multiple Application Load Balancers (ALBs) each of which has a dedicated Auto Scaling group and fleet of Amazon EC2 instances. The application does not require a build stage and when it is committed to AWS CodeCommit, the application must trigger a simultaneous deployment to all ALBs Auto Scaling groups and EC2 fleets.

Which architecture will meet these requirements with the LEAST amount of configuration?

- A. Create a single AWS CodePipeline pipeline that deploys the application in parallel using unique AWS CodeDeploy applications and deployment groups created for each ALB-Auto Scaling group pair.
- B. Create a single AWS CodePipeline pipeline that deploys the application using a single AWS CodeDeploy application and single deployment group.
- C. Create a single AWS CodePipeline pipeline that deploys the application in parallel using a single AWS CodeDeploy application and unique deployment group for each ALB-Auto Scaling group pair.

D. Create an AWS CodePipeline pipeline for each ALB-Auto Scaling group pair that deploys the application using an AWS CodeDeploy application and deployment group created for the same ALB-Auto Scaling group pair.

Answer: C

Explanation:

<https://docs.aws.amazon.com/codedeploy/latest/userguide/deployment-groups.html>

NEW QUESTION 60

A company uses AWS Secrets Manager to store a set of sensitive API keys that an AWS Lambda function uses. When the Lambda function is invoked, the Lambda function retrieves the API keys and makes an API call to an external service. The Secrets Manager secret is encrypted with the default AWS Key Management Service (AWS KMS) key.

A DevOps engineer needs to update the infrastructure to ensure that only the Lambda function's execution role can access the values in Secrets Manager. The solution must apply the principle of least privilege.

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

- A. Update the default KMS key for Secrets Manager to allow only the Lambda function's execution role to decrypt.
- B. Create a KMS customer managed key that trusts Secrets Manager and allows the Lambda function's execution role to decrypt
- C. Update Secrets Manager to use the new customer managed key.
- D. Create a KMS customer managed key that trusts Secrets Manager and allows the account's :root principal to decrypt
- E. Update Secrets Manager to use the new customer managed key.
- F. Ensure that the Lambda function's execution role has the KMS permissions scoped on the resource level
- G. Configure the permissions so that the KMS key can encrypt the Secrets Manager secret.
- H. Remove all KMS permissions from the Lambda function's execution role.

Answer: BD

Explanation:

The requirement is to update the infrastructure to ensure that only the Lambda function's execution role can access the values in Secrets Manager. The solution must apply the principle of least privilege, which means granting the minimum permissions necessary to perform a task.

To do this, the DevOps engineer needs to use the following steps:

? Create a KMS customer managed key that trusts Secrets Manager and allows the Lambda function's execution role to decrypt. A customer managed key is a symmetric encryption key that is fully managed by the customer. The customer can define the key policy, which specifies who can use and manage the key. By creating a customer managed key, the DevOps engineer can restrict the decryption permission to only the Lambda function's execution role, and prevent other principals from accessing the secret values. The customer managed key also needs to trust Secrets Manager, which means allowing Secrets Manager to use the key to encrypt and decrypt secrets on behalf of the customer.

? Update Secrets Manager to use the new customer managed key. Secrets Manager allows customers to choose which KMS key to use for encrypting each secret. By default, Secrets Manager uses the default KMS key for Secrets Manager, which is a service-managed key that is shared by all customers in the same AWS Region. By updating Secrets Manager to use the new customer managed key, the DevOps engineer can ensure that only the Lambda function's execution role can decrypt the secret values using that key.

? Ensure that the Lambda function's execution role has the KMS permissions scoped on the resource level. The Lambda function's execution role is an IAM role that grants permissions to the Lambda function to access AWS services and resources. The role needs to have KMS permissions to use the customer managed key for decryption. However, to apply the principle of least privilege, the role should have the permissions scoped on the resource level, which means specifying the ARN of the customer managed key as a condition in the IAM policy statement. This way, the role can only use that specific key and not any other KMS keys in the account.

NEW QUESTION 61

A company updated the AWS CloudFormation 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 AWS CloudFormation FullAccess 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 64

A company is divided into teams. Each team has an AWS account and all the accounts are in an organization in AWS Organizations. Each team must retain full administrative rights to its AWS account. Each team also must be allowed to access only AWS services that the company approves for use. AWS services must gain approval through a request and approval process.

How should a DevOps engineer configure the accounts to meet these requirements?

- A. Use AWS CloudFormation StackSets to provision IAM policies in each account to deny access to restricted AWS services.
- B. In each account, configure AWS Config rules that ensure that the policies are attached to IAM principals in the account.
- C. Use AWS Control Tower to provision the accounts into OUs within the organization. Configure AWS Control Tower to enable AWS IAM Identity Center (AWS Single Sign-On). Configure IAM Identity Center to provide administrative access. Include deny policies on user roles for restricted AWS services.
- D. Place all the accounts under a new top-level OU within the organization. Create an SCP that denies access to restricted AWS services. Attach the SCP to the OU.
- E. Create an SCP that allows access to only approved AWS services.
- F. Attach the SCP to the root OU of the organization.

G. Remove the FullAWSAccess SCP from the root OU of the organization.

Answer: C

Explanation:

<https://docs.aws.amazon.com/vpc/latest/userguide/managed-prefix-lists.html> A managed prefix list is a set of one or more CIDR blocks. You can use prefix lists to make it easier to configure and maintain your security groups and route tables. <https://docs.aws.amazon.com/vpc/latest/userguide/sharing-managed-prefix-lists.html> With AWS Resource Access Manager (AWS RAM), the owner of a prefix list can share a prefix list with the following: Specific AWS accounts inside or outside of its organization in AWS Organizations An organizational unit inside its organization in AWS Organizations An entire organization in AWS Organizations

NEW QUESTION 66

A company is hosting a static website from an Amazon S3 bucket. The website is available to customers at example.com. The company uses an Amazon Route 53 weighted routing policy with a TTL of 1 day. The company has decided to replace the existing static website with a dynamic web application. The dynamic web application uses an Application Load Balancer (ALB) in front of a fleet of Amazon EC2 instances.

On the day of production launch to customers, the company creates an additional Route 53 weighted DNS record entry that points to the ALB with a weight of 255 and a TTL of 1 hour. Two days later, a DevOps engineer notices that the previous static website is displayed sometimes when customers navigate to example.com.

How can the DevOps engineer ensure that the company serves only dynamic content for example.com?

- A. Delete all objects, including previous versions, from the S3 bucket that contains the static website content.
- B. Update the weighted DNS record entry that points to the S3 bucket
- C. Apply a weight of 0. Specify the domain reset option to propagate changes immediately.
- D. Configure webpage redirect requests on the S3 bucket with a hostname that redirects to the ALB.
- E. Remove the weighted DNS record entry that points to the S3 bucket from the example.com hosted zone
- F. Wait for DNS propagation to become complete.

Answer: D

NEW QUESTION 68

A company manages a web application that runs on Amazon EC2 instances behind an Application Load Balancer (ALB). The EC2 instances run in an Auto Scaling group across multiple Availability Zones. The application uses an Amazon RDS for MySQL DB instance to store the data. The company has configured Amazon Route 53 with an alias record that points to the ALB.

A new company guideline requires a geographically isolated disaster recovery (DR) site with an RTO of 4 hours and an RPO of 15 minutes.

Which DR strategy will meet these requirements with the LEAST change to the application stack?

- A. Launch a replica environment of everything except Amazon RDS in a different Availability Zone. Create an RDS read replica in the new Availability Zone, and configure the new stack to point to the local RDS DB instance.
- B. Add the new stack to the Route 53 record set by using a health check to configure a failover routing policy.
- C. Launch a replica environment of everything except Amazon RDS in a different AWS Region.
- D. Create an RDS read replica in the new Region and configure the new stack to point to the local RDS DB instance.
- E. Add the new stack to the Route 53 record set by using a health check to configure a latency routing policy.
- F. Launch a replica environment of everything except Amazon RDS in a different AWS Region.
- G. In the event of an outage, copy and restore the latest RDS snapshot from the primary.
- H. Replicate to the DR Region. Adjust the Route 53 record set to point to the ALB in the DR Region.
- I. Launch a replica environment of everything except Amazon RDS in a different AWS Region.
- J. Create an RDS read replica in the new Region and configure the new environment to point to the local RDS DB instance.
- K. Add the new stack to the Route 53 record set by using a health check to configure a failover routing policy.
- L. In the event of an outage, promote the read replica to primary.

Answer: D

NEW QUESTION 70

A company is using AWS to run digital workloads. Each application team in the company has its own AWS account for application hosting. The accounts are consolidated in an organization in AWS Organizations.

The company wants to enforce security standards across the entire organization. To avoid noncompliance because of security misconfiguration, the company has enforced the use of AWS CloudFormation. A production support team can modify resources in the production environment by using the AWS Management Console to troubleshoot and resolve application-related issues.

A DevOps engineer must implement a solution to identify in near real time any AWS

service misconfiguration that results in noncompliance. The solution must automatically remediate the issue within 15 minutes of identification. The solution also must track noncompliant resources and events in a centralized dashboard with accurate timestamps.

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

- A. Use CloudFormation drift detection to identify noncompliant resources.
- B. Use drift detection events from CloudFormation to invoke an AWS Lambda function for remediation.
- C. Configure the Lambda function to publish logs to an Amazon CloudWatch Logs log group.
- D. Configure an Amazon CloudWatch dashboard to use the log group for tracking.
- E. Turn on AWS CloudTrail in the AWS account.
- F. Analyze CloudTrail logs by using Amazon Athena to identify noncompliant resources.
- G. Use AWS Step Functions to track query results on Athena for drift detection and to invoke an AWS Lambda function for remediation.
- H. For tracking, set up an Amazon QuickSight dashboard that uses Athena as the data source.
- I. Turn on the configuration recorder in AWS Config in all the AWS accounts to identify noncompliant resources.
- J. Enable AWS Security Hub with the `--no-enable-default-standards` option in all the AWS accounts.
- K. Set up AWS Config managed rules and custom rules.
- L. Set up automatic remediation by using AWS Config conformance packs.
- M. For tracking, set up a dashboard on Security Hub in a designated Security Hub administrator account.
- N. Turn on AWS CloudTrail in the AWS account.
- O. Analyze CloudTrail logs by using Amazon CloudWatch Logs to identify noncompliant resources.
- P. Use CloudWatch Logs filters for drift detection.
- Q. Use Amazon EventBridge to invoke the Lambda function for remediation.
- R. Stream filtered CloudWatch logs to Amazon OpenSearch Service.

S. Set up a dashboard on OpenSearch Service for tracking.

Answer: C

Explanation:

The best solution is to use AWS Config and AWS Security Hub to identify and remediate noncompliant resources across multiple AWS accounts. AWS Config enables continuous monitoring of the configuration of AWS resources and evaluates them against desired configurations. AWS Config can also automatically remediate noncompliant resources by using conformance packs, which are a collection of AWS Config rules and remediation actions that can be deployed as a single entity. AWS Security Hub provides a comprehensive view of the security posture of AWS accounts and resources. AWS Security Hub can aggregate and normalize the findings from AWS Config and other AWS services, as well as from partner solutions. AWS Security Hub can also be used to create a dashboard for tracking noncompliant resources and events in a centralized location.

The other options are not optimal because they either require more development overhead, do not provide near real time detection and remediation, or do not provide a centralized dashboard for tracking.

Option A is not optimal because CloudFormation drift detection is not a near real time solution. Drift detection has to be manually initiated on each stack or resource, or scheduled using a cron expression. Drift detection also does not provide remediation

actions, so a custom Lambda function has to be developed and invoked. CloudWatch Logs and dashboard can be used for tracking, but they do not provide a comprehensive view of the security posture of the AWS accounts and resources.

Option B is not optimal because CloudTrail logs analysis using Athena is not a near real time solution. Athena queries have to be manually run or scheduled using a cron expression. Athena also does not provide remediation actions, so a custom Lambda function has to be developed and invoked. Step Functions can be used to orchestrate the query and remediation workflow, but it adds more complexity and cost. QuickSight dashboard can be used for tracking, but it does not provide a comprehensive view of the security posture of the AWS accounts and resources.

Option D is not optimal because CloudTrail logs analysis using CloudWatch Logs is not a near real time solution. CloudWatch Logs filters have to be manually created or updated for each resource type and configuration change. CloudWatch Logs also does not provide remediation actions, so a custom Lambda function has to be developed and invoked. EventBridge can be used to trigger the Lambda function, but it adds more complexity and cost. OpenSearch Service dashboard can be used for tracking, but it does not provide a comprehensive view of the security posture of the AWS accounts and resources. References:

? AWS Config conformance packs

? Introducing AWS Config conformance packs

? Managing conformance packs across all accounts in your organization

NEW QUESTION 75

A company is using AWS CodePipeline to automate its release pipeline. AWS CodeDeploy is being used in the pipeline to deploy an application to Amazon Elastic Container Service (Amazon ECS) using the blue/green deployment model. The company wants to implement scripts to test the green version of the application before shifting traffic. These scripts will complete in 5 minutes or less. If errors are discovered during these tests, the application must be rolled back.

Which strategy will meet these requirements?

- A. Add a stage to the CodePipeline pipeline between the source and deploy stage
- B. Use AWS CodeBuild to create a runtime environment and build commands in the buildspec file to invoke test script
- C. If errors are found, use the aws deploy stop-deployment command to stop the deployment.
- D. Add a stage to the CodePipeline pipeline between the source and deploy stage
- E. Use this stage to invoke an AWS Lambda function that will run the test script
- F. If errors are found, use the aws deploy stop-deployment command to stop the deployment.
- G. Add a hooks section to the CodeDeploy AppSpec file
- H. Use the AfterAllowTestTraffic lifecycle event to invoke an AWS Lambda function to run the test script
- I. If errors are found, exit the Lambda function with an error to initiate rollback.
- J. Add a hooks section to the CodeDeploy AppSpec file
- K. Use the AfterAllowTraffic lifecycle event to invoke the test script
- L. If errors are found, use the aws deploy stop-deployment CLI command to stop the deployment.

Answer: C

Explanation:

<https://docs.aws.amazon.com/codedeploy/latest/userguide/reference-appspec-file-structure-hooks.html>

NEW QUESTION 79

A DevOps engineer manages a large commercial website that runs on Amazon EC2. The website uses Amazon Kinesis Data Streams to collect and process web logs. The DevOps engineer manages the Kinesis consumer application, which also runs on Amazon EC2.

Sudden increases of data cause the Kinesis consumer application to fall behind and the Kinesis data streams drop records before the records can be processed.

The DevOps engineer must implement a solution to improve stream handling.

Which solution meets these requirements with the MOST operational efficiency?

- A. Modify the Kinesis consumer application to store the logs durably in Amazon S3 Use Amazon EMR to process the data directly on Amazon S3 to derive customer insights Store the results in Amazon S3.
- B. Horizontally scale the Kinesis consumer application by adding more EC2 instances based on the Amazon CloudWatch GetRecords IteratorAgeMilliseconds metric Increase the retention period of the Kinesis data streams.
- C. Convert the Kinesis consumer application to run as an AWS Lambda function
- D. Configure the Kinesis data streams as the event source for the Lambda function to process the data streams
- E. Increase the number of shards in the Kinesis data streams to increase the overall throughput so that the consumer application processes the data faster.

Answer: B

Explanation:

<https://docs.aws.amazon.com/streams/latest/dev/monitoring-with-cloudwatch.html>

GetRecords.IteratorAgeMilliseconds - The age of the last record in all GetRecords calls made against a Kinesis stream, measured over the specified time period. Age is the difference between the current time and when the last record of the GetRecords call was written to the stream. The Minimum and Maximum statistics can be used to track the progress of Kinesis consumer applications. A value of zero indicates that the records being read are completely caught up.

NEW QUESTION 82

A company's production environment uses an AWS CodeDeploy blue/green deployment to deploy an application. The deployment includes Amazon EC2 Auto Scaling groups that launch instances that run Amazon Linux 2.

A working appspec. yml file exists in the code repository and contains the following text.

```
version: 0.0
os: linux
files:
  - source: /
    destination: /var/www/html/application
```

A DevOps engineer needs to ensure that a script downloads and installs a license file onto the instances before the replacement instances start to handle request traffic. The DevOps engineer adds a hooks section to the appspec. yml file.

Which hook should the DevOps engineer use to run the script that downloads and installs the license file?

- A. AfterBlockTraffic
- B. BeforeBlockTraffic
- C. BeforeInstall
- D. Download Bundle

Answer: C

Explanation:

This hook runs before the new application version is installed on the replacement instances. This is the best place to run the script because it ensures that the license file is downloaded and installed before the replacement instances start to handle request traffic. If you use any other hook, you may encounter errors or inconsistencies in your application.

NEW QUESTION 83

A company has configured an Amazon S3 event source on an AWS Lambda function. The company needs the Lambda function to run when a new object is created or an existing object is modified in a particular S3 bucket. The Lambda function will use the S3 bucket name and the S3 object key of the incoming event to read the contents of the created or modified S3 object. The Lambda function will parse the contents and save the parsed contents to an Amazon DynamoDB table. The Lambda function's execution role has permissions to read from the S3 bucket and to write to the DynamoDB table. During testing, a DevOps engineer discovers that the Lambda function does not run when objects are added to the S3 bucket or when existing objects are modified. Which solution will resolve this problem?

- A. Increase the memory of the Lambda function to give the function the ability to process large files from the S3 bucket.
- B. Create a resource policy on the Lambda function to grant Amazon S3 the permission to invoke the Lambda function for the S3 bucket.
- C. Configure an Amazon Simple Queue Service (Amazon SQS) queue as an OnFailure destination for the Lambda function.
- D. Provision space in the /tmp folder of the Lambda function to give the function the ability to process large files from the S3 bucket.

Answer: B

Explanation:

? Option A is incorrect because increasing the memory of the Lambda function does not address the root cause of the problem, which is that the Lambda function is not triggered by the S3 event source. Increasing the memory of the Lambda function might improve its performance or reduce its execution time, but it does not affect its invocation. Moreover, increasing the memory of the Lambda function might incur higher costs, as Lambda charges based on the amount of memory allocated to the function.

? Option B is correct because creating a resource policy on the Lambda function to grant Amazon S3 the permission to invoke the Lambda function for the S3 bucket is a necessary step to configure an S3 event source. A resource policy is a JSON document that defines who can access a Lambda resource and under what conditions. By granting Amazon S3 permission to invoke the Lambda function, the company ensures that the Lambda function runs when a new object is created or an existing object is modified in the S3 bucket.

? Option C is incorrect because configuring an Amazon Simple Queue Service (Amazon SQS) queue as an On-Failure destination for the Lambda function does not help with triggering the Lambda function. An On-Failure destination is a feature that allows Lambda to send events to another service, such as SQS or Amazon Simple Notification Service (Amazon SNS), when a function invocation fails. However, this feature only applies to asynchronous invocations, and S3 event sources use synchronous invocations. Therefore, configuring an SQS queue as an On-Failure destination would have no effect on the problem.

? Option D is incorrect because provisioning space in the /tmp folder of the Lambda function does not address the root cause of the problem, which is that the Lambda function is not triggered by the S3 event source. Provisioning space in the /tmp folder of the Lambda function might help with processing large files from the S3 bucket, as it provides temporary storage for up to 512 MB of data. However, it does not affect the invocation of the Lambda function.

References:

- ? Using AWS Lambda with Amazon S3
- ? Lambda resource access permissions
- ? AWS Lambda destinations
- ? [AWS Lambda file system]

NEW QUESTION 88

A company runs an application on Amazon EC2 instances. The company uses a series of AWS CloudFormation stacks to define the application resources. A developer performs updates by building and testing the application on a laptop and then uploading the build output and CloudFormation stack templates to Amazon S3. The developer's peers review the changes before the developer performs the CloudFormation stack update and installs a new version of the application onto the EC2 instances.

The deployment process is prone to errors and is time-consuming when the developer updates each EC2 instance with the new application. The company wants to automate as much of the application deployment process as possible while retaining a final manual approval step before the modification of the application or resources.

The company already has moved the source code for the application and the CloudFormation templates to AWS CodeCommit. The company also has created an AWS CodeBuild project to build and test the application.

Which combination of steps will meet the company's requirements? (Choose two.)

- A. Create an application group and a deployment group in AWS CodeDeploy
- B. Install the CodeDeploy agent on the EC2 instances.
- C. Create an application revision and a deployment group in AWS CodeDeploy
- D. Create an environment in CodeDeploy

- E. Register the EC2 instances to the CodeDeploy environment.
- F. Use AWS CodePipeline to invoke the CodeBuild job, run the CloudFormation update, and pause for a manual approval step.
- G. After approval, start the AWS CodeDeploy deployment.
- H. Use AWS CodePipeline to invoke the CodeBuild job, create CloudFormation change sets for each of the application stacks, and pause for a manual approval step.
- I. After approval, run the CloudFormation change sets and start the AWS CodeDeploy deployment.
- J. Use AWS CodePipeline to invoke the CodeBuild job, create CloudFormation change sets for each of the application stacks, and pause for a manual approval step.
- K. After approval, start the AWS CodeDeploy deployment.

Answer: AD

Explanation:

A- <https://docs.aws.amazon.com/codedeploy/latest/userguide/codedeploy-agent.html> D - This option correctly utilizes AWS CodePipeline to invoke the CodeBuild job and create CloudFormation change sets. It adds a manual approval step before executing the change sets and starting the AWS CodeDeploy deployment. This ensures that the deployment process is automated while retaining the final manual approval step.

NEW QUESTION 89

A company builds a container image in an AWS CodeBuild project by running Docker commands. After the container image is built, the CodeBuild project uploads the container image to an Amazon S3 bucket. The CodeBuild project has an IAM service role that has permissions to access the S3 bucket.

A DevOps engineer needs to replace the S3 bucket with an Amazon Elastic Container Registry (Amazon ECR) repository to store the container images. The DevOps engineer creates an ECR private image repository in the same AWS Region of the CodeBuild project. The DevOps engineer adjusts the IAM service role with the permissions that are necessary to work with the new ECR repository. The DevOps engineer also places new repository information into the docker build command and the docker push command that are used in the buildspec.yml file.

When the CodeBuild project runs a build job, the job fails when the job tries to access the ECR repository.

Which solution will resolve the issue of failed access to the ECR repository?

- A. Update the buildspec.yml file to log in to the ECR repository by using the aws ecr get-login-password AWS CLI command to obtain an authentication token.
- B. Update the docker login command to use the authentication token to access the ECR repository.
- C. Add an environment variable of type SECRETS_MANAGER to the CodeBuild project.
- D. In the environment variable, include the ARN of the CodeBuild project's IAM service role.
- E. Update the buildspec.yml file to use the new environment variable to log in with the docker login command to access the ECR repository.
- F. Update the ECR repository to be a public image repository.
- G. Add an ECR repository policy that allows the IAM service role to have access.
- H. Update the buildspec.yml file to use the AWS CLI to assume the IAM service role for ECR operation.
- I. Add an ECR repository policy that allows the IAM service role to have access.

Answer: A

Explanation:

(A) When Docker communicates with an Amazon Elastic Container Registry (ECR) repository, it requires authentication. You can authenticate your Docker client to the Amazon ECR registry with the help of the AWS CLI (Command Line Interface). Specifically, you can use the "aws ecr get-login-password" command to get an authorization token and then use Docker's "docker login" command with that token to authenticate to the registry. You would need to perform these steps in your buildspec.yml file before attempting to push or pull images from/to the ECR repository.

NEW QUESTION 91

A company uses AWS and has a VPC that contains critical compute infrastructure with predictable traffic patterns. The company has configured VPC flow logs that are published to a log group in Amazon CloudWatch Logs.

The company's DevOps team needs to configure a monitoring solution for the VPC flow logs to identify anomalies in network traffic to the VPC over time. If the monitoring solution detects an anomaly, the company needs the ability to initiate a response to the anomaly.

How should the DevOps team configure the monitoring solution to meet these requirements?

- A. Create an Amazon Kinesis data stream.
- B. Subscribe the log group to the data stream.
- C. Configure Amazon Kinesis Data Analytics to detect log anomalies in the data stream.
- D. Create an AWS Lambda function to use as the output of the data stream.
- E. Configure the Lambda function to write to the default Amazon EventBridge event bus in the event of an anomaly finding.
- F. Create an Amazon Kinesis Data Firehose delivery stream that delivers events to an Amazon S3 bucket.
- G. Subscribe the log group to the delivery stream.
- H. Configure Amazon Lookout for Metrics to monitor the data in the S3 bucket for anomalies.
- I. Create an AWS Lambda function to run in response to Lookout for Metrics anomaly finding.
- J. Configure the Lambda function to publish to the default Amazon EventBridge event bus.
- K. Create an AWS Lambda function to detect anomalies.
- L. Configure the Lambda function to publish an event to the default Amazon EventBridge event bus if the Lambda function detects an anomaly.
- M. Subscribe the Lambda function to the log group.
- N. Create an Amazon Kinesis data stream.
- O. Subscribe the log group to the data stream.
- P. Create an AWS Lambda function to detect log anomalies.
- Q. Configure the Lambda function to write to the default Amazon EventBridge event bus if the Lambda function detects an anomaly.
- R. Set the Lambda function as the processor for the data stream.

Answer: D

Explanation:

To meet the requirements, the DevOps team needs to configure a monitoring solution for the VPC flow logs that can detect anomalies in network traffic over time and initiate a response to the anomaly. The DevOps team can use Amazon Kinesis Data Streams to ingest and process streaming data from CloudWatch Logs. The DevOps team can subscribe the log group to a Kinesis data stream, which will deliver log events from CloudWatch Logs to Kinesis Data Streams in near real-time. The DevOps team can then create an AWS Lambda function to detect log anomalies using machine learning or statistical methods. The Lambda function can be set as a processor for the data stream, which means that it will process each record from the stream before sending it to downstream applications or destinations. The Lambda function can also write to the default Amazon EventBridge event bus if it detects an anomaly, which will allow other AWS services or custom applications to respond to the anomaly event.

NEW QUESTION 92

A company has a legacy application A DevOps engineer needs to automate the process of building the deployable artifact for the legacy application. The solution must store the deployable artifact in an existing Amazon S3 bucket for future deployments to reference Which solution will meet these requirements in the MOST operationally efficient way?

- A. Create a custom Docker image that contains all the dependencies for the legacy application Store the custom Docker image in a new Amazon Elastic Container Registry (Amazon ECR) repository Configure a new AWS CodeBuild project to use the custom Docker image to build the deployable artifact and to save the artifact to the S3 bucket.
- B. Launch a new Amazon EC2 instance Install all the dependencies (or the legacy application on the EC2 instance Use the EC2 instance to build the deployable artifact and to save the artifact to the S3 bucket.
- C. Create a custom EC2 Image Builder image Install all the dependencies for the legacy application on the image Launch a new Amazon EC2 instance from the image Use the new EC2 instance to build the deployable artifact and to save the artifact to the S3 bucket.
- D. Create an Amazon Elastic Kubernetes Service (Amazon EKS) cluster with an AWS Fargate profile that runs in multiple Availability Zones Create a custom Docker image that contains all the dependencies for the legacy application Store the custom Docker image in a new Amazon Elastic Container Registry (Amazon ECR) repository Use the custom Docker image inside the EKS cluster to build the deployable artifact and to save the artifact to the S3 bucket.

Answer: A

Explanation:

This approach is the most operationally efficient because it leverages the benefits of containerization, such as isolation and reproducibility, as well as AWS managed services. AWS CodeBuild is a fully managed build service that can compile your source code, run tests, and produce deployable software packages. By using a custom Docker image that includes all dependencies, you can ensure that the environment in which your code is built is consistent. Using Amazon ECR to store Docker images lets you easily deploy the images to any environment. Also, you can directly upload the build artifacts to Amazon S3 from AWS CodeBuild, which is beneficial for version control and archival purposes.

NEW QUESTION 93

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 97

A company needs a strategy for failover and disaster recovery of its data and application. The application uses a MySQL database and Amazon EC2 instances. The company requires a maximum RPO of 2 hours and a maximum RTO of 10 minutes for its data and application at all times. Which combination of deployment strategies will meet these requirements? (Select TWO.)

- A. Create an Amazon Aurora Single-AZ cluster in multiple AWS Regions as the data stor
- B. Use Aurora's automatic recovery capabilities in the event of a disaster.
- C. Create an Amazon Aurora global database in two AWS Regions as the data stor
- D. In the event of a failure, promote the secondary Region to the primary for the applicatio
- E. Update the application to use the Aurora cluster endpoint in the secondary Region.
- F. Create an Amazon Aurora cluster in multiple AWS Regions as the data stor
- G. Use a Network Load Balancer to balance the database traffic in different Regions.
- H. Set up the application in two AWS Region
- I. Use Amazon Route 53 failover routing that points to Application Load Balancers in both Region
- J. Use health checks and Auto Scaling groups in each Region.
- K. Set up the application in two AWS Region
- L. Configure AWS Global Accelerator to point to Application Load Balancers (ALBs) in both Region
- M. Add both ALBs to a single endpoint grou
- N. Use health checks and Auto Scaling groups in each Region.

Answer: BE

Explanation:

To meet the requirements of failover and disaster recovery, the company should use the following deployment strategies:

? Create an Amazon Aurora global database in two AWS Regions as the data store.

In the event of a failure, promote the secondary Region to the primary for the application. Update the application to use the Aurora cluster endpoint in the secondary Region. This strategy can provide a low RPO and RTO for the data, as Aurora global database replicates data with minimal latency across Regions and allows fast and easy failover¹². The company can use the Amazon Aurora cluster endpoint to connect to the current primary DB cluster without needing to change any application code¹.

? Set up the application in two AWS Regions. Configure AWS Global Accelerator to

point to Application Load Balancers (ALBs) in both Regions. Add both ALBs to a single endpoint group. Use health checks and Auto Scaling groups in each Region. This strategy can provide high availability and performance for the application, as AWS Global Accelerator uses the AWS global network to route traffic to the closest healthy endpoint³. The company can also use static IP addresses that are assigned by Global Accelerator as a fixed entry point for their application¹. By using health checks and Auto Scaling groups, the company can ensure that their application can scale up or down based on demand and handle any instance failures⁴.

The other options are incorrect because:

? Creating an Amazon Aurora Single-AZ cluster in multiple AWS Regions as the data store would not provide a fast failover or disaster recovery solution, as the company would need to manually restore data from backups or snapshots in another Region in case of a failure.

? Creating an Amazon Aurora cluster in multiple AWS Regions as the data store and using a Network Load Balancer to balance the database traffic in different

Regions would not work, as Network Load Balancers do not support cross-Region routing. Moreover, this strategy would not provide a consistent view of the data across Regions, as Aurora clusters do not replicate data automatically between Regions unless they are part of a global database.

? Setting up the application in two AWS Regions and using Amazon Route 53 failover routing that points to Application Load Balancers in both Regions would not provide a low RTO, as Route 53 failover routing relies on DNS resolution, which can take time to propagate changes across different DNS servers and clients. Moreover, this strategy would not provide deterministic routing, as Route 53 failover routing depends on DNS caching behavior, which can vary depending on different factors.

NEW QUESTION 100

A company uses an organization in AWS Organizations to manage its AWS accounts. The company recently acquired another company that has standalone AWS accounts. The acquiring company's DevOps team needs to consolidate the administration of the AWS accounts for both companies and retain full administrative control of the accounts. The DevOps team also needs to collect and group findings across all the accounts to implement and maintain a security posture.

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

- A. Invite the acquired company's AWS accounts to join the organization
- B. Create an SCP that has full administrative privilege
- C. Attach the SCP to the management account.
- D. Invite the acquired company's AWS accounts to join the organization
- E. Create the OrganizationAccountAccessRole IAM role in the invited account
- F. Grant permission to the management account to assume the role.
- G. Use AWS Security Hub to collect and group findings across all account
- H. Use Security Hub to automatically detect new accounts as the accounts are added to the organization.
- I. Use AWS Firewall Manager to collect and group findings across all account
- J. Enable all features for the organization
- K. Designate an account in the organization as the delegated administrator account for Firewall Manager.
- L. Use Amazon Inspector to collect and group findings across all account
- M. Designate an account in the organization as the delegated administrator account for Amazon Inspector.

Answer: BC

Explanation:

The correct answer is B and C. Option B is correct because inviting the acquired company's AWS accounts to join the organization and creating the OrganizationAccountAccessRole IAM role in the invited accounts allows the management account to assume the role and gain full administrative access to the member accounts. Option C is correct because using AWS Security Hub to collect and group findings across all accounts enables the DevOps team to monitor and improve the security posture of the organization. Security Hub can automatically detect new accounts as the accounts are added to the organization and enable Security Hub for them. Option A is incorrect because creating an SCP that has full administrative privileges and attaching it to the management account does not grant the management account access to the member accounts. SCPs are used to restrict the permissions of the member accounts, not to grant permissions to the management account. Option D is incorrect because using AWS Firewall Manager to collect and group findings across all accounts is not a valid use case for Firewall Manager. Firewall Manager is used to centrally configure and manage firewall rules across the organization, not to collect and group security findings. Option E is incorrect because using Amazon Inspector to collect and group findings across all accounts is not a valid use case for Amazon Inspector. Amazon Inspector is used to assess the security and compliance of applications running on Amazon EC2 instances, not to collect and group security findings across accounts. References:

- ? Inviting an AWS account to join your organization
- ? Enabling and disabling AWS Security Hub
- ? Service control policies
- ? AWS Firewall Manager
- ? Amazon Inspector

NEW QUESTION 105

A development team uses AWS CodeCommit, AWS CodePipeline, and AWS CodeBuild to develop and deploy an application. Changes to the code are submitted by pull requests. The development team reviews and merges the pull requests, and then the pipeline builds and tests the application.

Over time, the number of pull requests has increased. The pipeline is frequently blocked because of failing tests. To prevent this blockage, the development team wants to run the unit and integration tests on each pull request before it is merged.

Which solution will meet these requirements?

- A. Create a CodeBuild project to run the unit and integration test
- B. Create a CodeCommit approval rule template
- C. Configure the template to require the successful invocation of the CodeBuild project
- D. Attach the approval rule to the project's CodeCommit repository.
- E. Create an Amazon EventBridge rule to match pullRequestCreated events from CodeCommit Create a CodeBuild project to run the unit and integration test
- F. Configure the CodeBuild project as a target of the EventBridge rule that includes a custom event payload with the CodeCommit repository and branch information from the event.
- G. Create an Amazon EventBridge rule to match pullRequestCreated events from CodeCommit
- H. Modify the existing CodePipeline pipeline to not run the deploy steps if the build is started from a pull request
- I. Configure the EventBridge rule to run the pipeline with a custom payload that contains the CodeCommit repository and branch information from the event.
- J. Create a CodeBuild project to run the unit and integration test
- K. Create a CodeCommit notification rule that matches when a pull request is created or updated
- L. Configure the notification rule to invoke the CodeBuild project.

Answer: B

Explanation:

CodeCommit generates events in CloudWatch, CloudWatch triggers the CodeBuild <https://aws.amazon.com/es/blogs/devops/complete-ci-cd-with-aws-codecommit-aws-codebuild-aws-codedeploy-and-aws-codepipeline/>

NEW QUESTION 110

A company detects unusual login attempts in many of its AWS accounts. A DevOps engineer must implement a solution that sends a notification to the company's security team when multiple failed login attempts occur. The DevOps engineer has already created an Amazon Simple Notification Service (Amazon SNS) topic and has subscribed the security team to the SNS topic.

Which solution will provide the notification with the LEAST operational effort?

- A. Configure AWS CloudTrail to send log management events to an Amazon CloudWatch Logs log group
- B. Create a CloudWatch Logs metric filter to match failed ConsoleLogin event
- C. Create a CloudWatch alarm that is based on the metric filter
- D. Configure an alarm action to send messages to the SNS topic.
- E. Configure AWS CloudTrail to send log management events to an Amazon S3 bucket
- F. Create an Amazon Athena query that returns a failure if the query finds failed logins in the logs in the S3 bucket
- G. Create an Amazon EventBridge rule to periodically run the query
- H. Create a second EventBridge rule to detect when the query fails and to send a message to the SNS topic.
- I. Configure AWS CloudTrail to send log data events to an Amazon CloudWatch Logs log group
- J. Create a CloudWatch logs metric filter to match failed ConsoleLogin event
- K. Create a CloudWatch alarm that is based on the metric filter
- L. Configure an alarm action to send messages to the SNS topic.
- M. Configure AWS CloudTrail to send log data events to an Amazon S3 bucket
- N. Configure an Amazon S3 event notification for the s3:ObjectCreated event type
- O. Filter the event type by ConsoleLogin failed event
- P. Configure the event notification to forward to the SNS topic.

Answer: C

Explanation:

The correct answer is C. Configuring AWS CloudTrail to send log data events to an Amazon CloudWatch Logs log group and creating a CloudWatch logs metric filter to match failed ConsoleLogin events is the simplest and most efficient way to monitor and alert on failed login attempts. Creating a CloudWatch alarm that is based on the metric filter and configuring an alarm action to send messages to the SNS topic will ensure that the security team is notified when multiple failed login attempts occur. This solution requires the least operational effort compared to the other options.

Option A is incorrect because it involves configuring AWS CloudTrail to send log management events instead of log data events. Log management events are used to track changes to CloudTrail configuration, such as creating, updating, or deleting a trail. Log data events are used to track API activity in AWS accounts, such as login attempts. Therefore, option A will not capture the failed ConsoleLogin events.

Option B is incorrect because it involves creating an Amazon Athena query and two Amazon EventBridge rules to monitor and alert on failed login attempts. This is a more complex and costly solution than using CloudWatch logs and alarms. Moreover, option B relies on the query returning a failure, which may not happen if the query is executed successfully but does not find any failed logins.

Option D is incorrect because it involves configuring AWS CloudTrail to send log data events to an Amazon S3 bucket and configuring an Amazon S3 event notification for the s3:ObjectCreated event type. This solution will not work because the s3:ObjectCreated event type does not allow filtering by ConsoleLogin failed events. The event notification will be triggered for any object created in the S3 bucket, regardless of the event type. Therefore, option D will generate a lot of false positives and unnecessary notifications. References:

? AWS CloudTrail Log File Examples

? Creating CloudWatch Alarms for CloudTrail Events: Examples

? Monitoring CloudTrail Log Files with Amazon CloudWatch Logs

NEW QUESTION 113

A company is using an Amazon Aurora cluster as the data store for its application. The Aurora cluster is configured with a single DB instance. The application performs read and write operations on the database by using the cluster's instance endpoint.

The company has scheduled an update to be applied to the cluster during an upcoming maintenance window. The cluster must remain available with the least possible interruption during the maintenance window.

What should a DevOps engineer do to meet these requirements?

- A. Add a reader instance to the Aurora cluster
- B. Update the application to use the Aurora cluster endpoint for write operation
- C. Update the Aurora cluster's reader endpoint for reads.
- D. Add a reader instance to the Aurora cluster
- E. Create a custom ANY endpoint for the cluster
- F. Update the application to use the Aurora cluster's custom ANY endpoint for read and write operations.
- G. Turn on the Multi-AZ option on the Aurora cluster
- H. Update the application to use the Aurora cluster endpoint for write operation
- I. Update the Aurora cluster's reader endpoint for reads.
- J. Turn on the Multi-AZ option on the Aurora cluster
- K. Create a custom ANY endpoint for the cluster
- L. Update the application to use the Aurora cluster's custom ANY endpoint for read and write operations.

Answer: C

Explanation:

To meet the requirements, the DevOps engineer should do the following:

? Turn on the Multi-AZ option on the Aurora cluster.

? Update the application to use the Aurora cluster endpoint for write operations.

? Update the Aurora cluster's reader endpoint for reads.

Turning on the Multi-AZ option will create a replica of the database in a different Availability Zone. This will ensure that the database remains available even if one of the Availability Zones is unavailable.

Updating the application to use the Aurora cluster endpoint for write operations will ensure that all writes are sent to both the primary and replica databases. This will ensure that the data is always consistent.

Updating the Aurora cluster's reader endpoint for reads will allow the application to read data from the replica database. This will improve the performance of the application during the maintenance window.

NEW QUESTION 118

A company has an application that runs on a fleet of Amazon EC2 instances. The application requires frequent restarts. The application logs contain error messages when a restart is required. The application logs are published to a log group in Amazon CloudWatch Logs.

An Amazon CloudWatch alarm notifies an application engineer through an Amazon Simple Notification Service (Amazon SNS) topic when the logs contain a large number of restart-related error messages. The application engineer manually restarts the application on the instances after the application engineer receives a notification from the SNS topic.

A DevOps engineer needs to implement a solution to automate the application restart on the instances without restarting the instances.

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

- A. Configure an AWS Systems Manager Automation runbook that runs a script to restart the application on the instance
- B. Configure the SNS topic to invoke the runbook.
- C. Create an AWS Lambda function that restarts the application on the instance
- D. Configure the Lambda function as an event destination of the SNS topic.
- E. Configure an AWS Systems Manager Automation runbook that runs a script to restart the application on the instance
- F. Create an AWS Lambda function to invoke the runboo
- G. Configure the Lambda function as an event destination of the SNS topic.
- H. Configure an AWS Systems Manager Automation runbook that runs a script to restart the application on the instance
- I. Configure an Amazon EventBridge rule that reacts when the CloudWatch alarm enters ALARM stat
- J. Specify the runbook as a target of the rule.

Answer: D

Explanation:

This solution meets the requirements in the most operationally efficient manner by automating the application restart process on the instances without restarting them. When the CloudWatch alarm enters the ALARM state, the EventBridge rule is triggered, which in turn invokes the Systems Manager Automation runbook that contains the script to restart the application on the instances.

NEW QUESTION 122

A company runs an application with an Amazon EC2 and on-premises configuration. A DevOps engineer needs to standardize patching across both environments. Company policy dictates that patching only happens during non-business hours. Which combination of actions will meet these requirements? (Choose three.)

- A. Add the physical machines into AWS Systems Manager using Systems Manager Hybrid Activations.
- B. Attach an IAM role to the EC2 instances, allowing them to be managed by AWS Systems Manager.
- C. Create IAM access keys for the on-premises machines to interact with AWS Systems Manager.
- D. Run an AWS Systems Manager Automation document to patch the systems every hour.
- E. Use Amazon EventBridge scheduled events to schedule a patch window.
- F. Use AWS Systems Manager Maintenance Windows to schedule a patch window.

Answer: ABF

Explanation:

<https://docs.aws.amazon.com/systems-manager/latest/userguide/sysman-managed-instance-activation.html>

NEW QUESTION 123

A company is using an organization in AWS Organizations to manage multiple AWS accounts. The company's development team wants to use AWS Lambda functions to meet resiliency requirements and is rewriting all applications to work with Lambda functions that are deployed in a VPC. The development team is using Amazon Elastic File System (Amazon EFS) as shared storage in Account A in the organization. The company wants to continue to use Amazon EFS with Lambda. Company policy requires all serverless projects to be deployed in Account B. A DevOps engineer needs to reconfigure an existing EFS file system to allow Lambda functions to access the data through an existing EFS access point. Which combination of steps should the DevOps engineer take to meet these requirements? (Select THREE.)

- A. Update the EFS file system policy to provide Account B with access to mount and write to the EFS file system in Account A.
- B. Create SCPs to set permission guardrails with fine-grained control for Amazon EFS.
- C. Create a new EFS file system in Account B. Use AWS Database Migration Service (AWS DMS) to keep data from Account A and Account B synchronized.
- D. Update the Lambda execution roles with permission to access the VPC and the EFS file system.
- E. Create a VPC peering connection to connect Account A to Account B.
- F. Configure the Lambda functions in Account B to assume an existing IAM role in Account A.

Answer: AEF

Explanation:

A Lambda function in one account can mount a file system in a different account. For this scenario, you configure VPC peering between the function VPC and the file system VPC. <https://docs.aws.amazon.com/lambda/latest/dg/services-efs.html> <https://aws.amazon.com/ru/blogs/storage/mount-amazon-efs-file-systems-cross-account-from-amazon-eks/>

* 1. Need to update the file system policy on EFS to allow mounting the file system into Account B.

File System Policy

\$ cat file-system-policy.json

```
{
  "Statement": [
    {
      "Effect": "Allow", "Action": [
        "elasticfilesystem:ClientMount", "elasticfilesystem:ClientWrite"
      ],
      "Principal": {
        "AWS": "arn:aws:iam::<aws-account-id-A>:root" # Replace with AWS account ID of EKS cluster
      }
    }
  ]
}
```

* 2. Need VPC peering between Account A and Account B as the pre-requisite

* 3. Need to assume cross-account IAM role to describe the mounts so that a specific mount can be chosen.

NEW QUESTION 124

A DevOps engineer is researching the least expensive way to implement an image batch processing cluster on AWS. The application cannot run in Docker containers and must run on Amazon EC2. The batch job stores checkpoint data on an NFS volume and can tolerate interruptions. Configuring the cluster software from a generic EC2 Linux image takes 30 minutes. What is the MOST cost-effective solution?

- A. Use Amazon EFS (or checkpoint data)
- B. To complete the job, use an EC2 Auto Scaling group and an On-Demand pricing model to provision EC2 instances temporally.
- C. Use GlusterFS on EC2 instances for checkpoint data
- D. To run the batch job configure EC2 instances manually When the job completes shut down the instances manually.
- E. Use Amazon EFS for checkpoint data Use EC2 Fleet to launch EC2 Spot Instances and utilize user data to configure the EC2 Linux instance on startup.
- F. Use Amazon EFS for checkpoint data Use EC2 Fleet to launch EC2 Spot Instances Create a custom AMI for the cluster and use the latest AMI when creating instances.

Answer: D

NEW QUESTION 128

A company has many AWS accounts. During AWS account creation the company uses automation to create an Amazon CloudWatch Logs log group in every AWS Region that the company operates in. The automation configures new resources in the accounts to publish logs to the provisioned log groups in their Region. The company has created a logging account to centralize the logging from all the other accounts. A DevOps engineer needs to aggregate the log groups from all the accounts to an existing Amazon S3 bucket in the logging account.

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

- A. In the logging account create a CloudWatch Logs destination with a destination policy
- B. For each new account subscribe the CloudWatch Logs log groups to the destination
- C. Destination Configure a single Amazon Kinesis data stream and a single Amazon Kinesis Data Firehose delivery stream to deliver the logs from the CloudWatch Logs destination to the S3 bucket.
- D. In the logging account create a CloudWatch Logs destination with a destination policy for each Region
- E. For each new account subscribe the CloudWatch Logs log groups to the destination
- F. Configure a single Amazon Kinesis data stream and a single Amazon Kinesis Data Firehose delivery stream to deliver the logs from all the CloudWatch Logs destinations to the S3 bucket.
- G. In the logging account create a CloudWatch Logs destination with a destination policy for each Region
- H. For each new account subscribe the CloudWatch Logs log groups to the destination Configure an Amazon Kinesis data stream and an Amazon Kinesis Data Firehose delivery stream for each Region to deliver the logs from the CloudWatch Logs destinations to the S3 bucket.
- I. In the logging account create a CloudWatch Logs destination with a destination policy
- J. For each new account subscribe the CloudWatch Logs log groups to the destination
- K. Configure a single Amazon Kinesis data stream to deliver the logs from the CloudWatch Logs destination to the S3 bucket.

Answer: C

Explanation:

This solution will meet the requirements in the most operationally efficient manner because it will use CloudWatch Logs destination to aggregate the log groups from all the accounts to a single S3 bucket in the logging account. However, unlike option A, this solution will create a CloudWatch Logs destination for each region, instead of a single destination for all regions. This will improve the performance and reliability of the log delivery, as it will avoid cross-region data transfer and latency issues. Moreover, this solution will use an Amazon Kinesis data stream and an Amazon Kinesis Data Firehose delivery stream for each region, instead of a single stream for all regions. This will also improve the scalability and throughput of the log delivery, as it will avoid bottlenecks and throttling issues that may occur with a single stream.

NEW QUESTION 131

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