Exam Questions DOP-C02

AWS Certified DevOps Engineer - Professional

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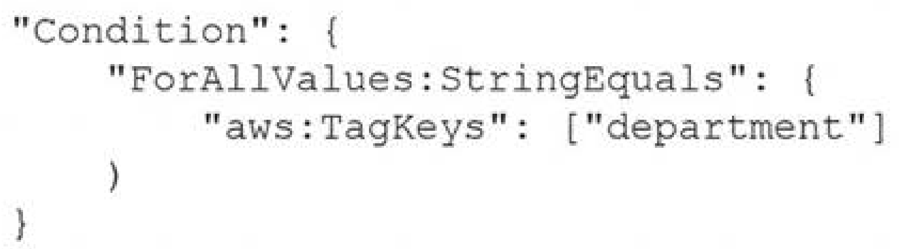
NEW QUESTION 1
A DevOps engineer manages a web application that runs on Amazon EC2 instances behind an Application Load Balancer (ALB). The instances run in an EC2 Auto Scaling group across multiple Availability Zones. The engineer needs to implement a deployment strategy that:
Launches a second fleet of instances with the same capacity as the original fleet. Maintains the original fleet unchanged while the second fleet is launched. Transitions traffic to the second fleet when the second fleet is fully deployed. Terminates the original fleet automatically 1 hour after transition.
Which solution will satisfy these requirements?

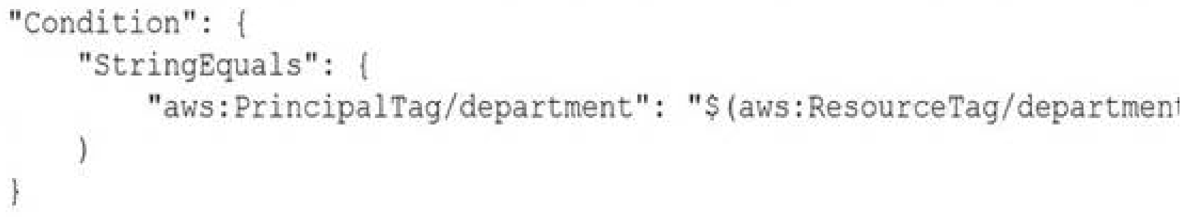
A. Use an AWS CloudFormation template with a retention policy for the ALB set to 1 hou
B. Update the Amazon Route 53 record to reflect the new ALB.
C. Use two AWS Elastic Beanstalk environments to perform a blue/green deployment from the original environment to the new on
D. Create an application version lifecycle policy to terminate the original environment in 1 hour.
E. Use AWS CodeDeploy with a deployment group configured with a blue/green deployment configuration Select the option Terminate the original instances in the deployment group with a waiting period of 1 hour.
F. Use AWS Elastic Beanstalk with the configuration set to Immutabl
G. Create an .ebextension using the Resources key that sets the deletion policy of the ALB to 1 hour, and deploy the application.

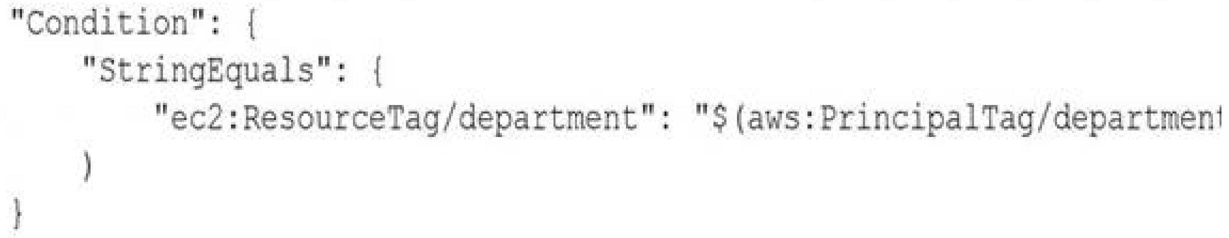
Answer: C

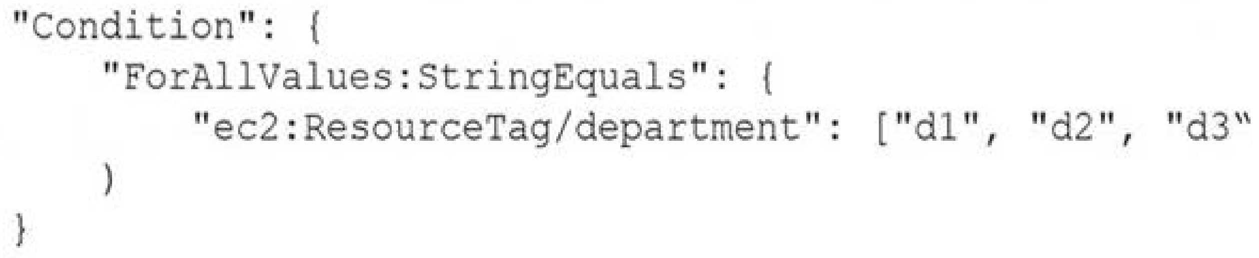
Explanation:
https://docs.aws.amazon.com/codedeploy/latest/APIReference/API_BlueInstanceTerminationOption.html The original revision termination settings are configured to wait 1 hour after traffic has been rerouted before
terminating the blue task set. https://docs.aws.amazon.com/AmazonECS/latest/developerguide/deployment-type-bluegreen.html

NEW QUESTION 2
A company has multiple AWS accounts. The company uses AWS IAM Identity Center (AWS Single
Sign-On) that is integrated with AWS Toolkit for Microsoft Azure DevOps. The attributes for access control feature is enabled in IAM Identity Center.
The attribute mapping list contains two entries. The department key is mapped to
${path:enterprise.department}. The costCenter key is mapped to ${path:enterprise.costCenter}.
All existing Amazon EC2 instances have a department tag that corresponds to three company departments (d1, d2, d3). A DevOps engineer must create policies based on the matching attributes. The policies must minimize administrative effort and must grant each Azure AD user access to only the EC2 instances that are tagged with the user's respective department name.
Which condition key should the DevOps engineer include in the custom permissions policies to meet these requirements?

A.

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

B.

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

C.

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

D.

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

Answer: C

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

NEW QUESTION 3
A company is performing vulnerability scanning for all Amazon EC2 instances across many accounts. The accounts are in an organization in AWS Organizations. Each account's VPCs are attached to a shared transit gateway. The VPCs send traffic to the internet through a central egress VPC. The company has enabled Amazon Inspector in a delegated administrator account and has enabled scanning for all member accounts.
A DevOps engineer discovers that some EC2 instances are listed in the "not scanning" tab in Amazon
Inspector.
Which combination of actions should the DevOps engineer take to resolve this issue? (Choose three.)

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

Answer: ABE

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

NEW QUESTION 4
A developer is maintaining a fleet of 50 Amazon EC2 Linux servers. The servers are part of an Amazon EC2 Auto Scaling group, and also use Elastic Load Balancing for load balancing.
Occasionally, some application servers are being terminated after failing ELB HTTP health checks. The developer would like to perform a root cause analysis on the issue, but before being able to access application logs, the server is terminated.
How can log collection be automated?

A. Use Auto Scaling lifecycle hooks to put instances in a Pending:Wait stat
B. Create an Amazon CloudWatch alarm for EC2 Instance Terminate Successful and trigger an AWS Lambda function that invokes an SSM Run Command script to collect logs, push them to Amazon S3, and complete the lifecycle action once logs are collected.
C. Use Auto Scaling lifecycle hooks to put instances in a Terminating:Wait stat
D. Create an AWS Config rule for EC2 Instance-terminate Lifecycle Action and trigger a step function that invokes a script to collect logs, push them to Amazon S3, and complete the lifecycle action once logs are collected.
E. Use Auto Scaling lifecycle hooks to put instances in a Terminating:Wait stat
F. Create an Amazon CloudWatch subscription filter for EC2 Instance Terminate Successful and trigger a CloudWatch agent that invokes a script to collect logs, push them to Amazon S3, and complete the lifecycle action once logs are collected.
G. Use Auto Scaling lifecycle hooks to put instances in a Terminating:Wait stat
H. Create an Amazon EventBridge rule for EC2 Instance-terminate Lifecycle Action and trigger an AWS Lambda function that invokes an SSM Run Command script to collect logs, push them to Amazon S3, and complete the lifecycle action once logs are collected.

Answer: D

Explanation:
https://blog.fourninecloud.com/auto-scaling-lifecycle-hooks-to-export-server-logs-when-instance-terminating-58

NEW QUESTION 5
A company has a mobile application that makes HTTP API calls to an Application Load Balancer (ALB). The ALB routes requests to an AWS Lambda function. Many different versions of the application are in use at any given time, including versions that are in testing by a subset of users. The version of the application is defined in the user-agent header that is sent with all requests to the API.
After a series of recent changes to the API, the company has observed issues with the application. The company needs to gather a metric for each API operation by response code for each version of the application that is in use. A DevOps engineer has modified the Lambda function to extract the API operation name, version information from the user-agent header and response code.
Which additional set of actions should the DevOps engineer take to gather the required metrics?

A. Modify the Lambda function to write the API operation name, response code, and version number as a log line to an Amazon CloudWatch Logs log grou
B. Configure a CloudWatch Logs metric filter that increments a metric for each API operation nam
C. Specify response code and application version as dimensions for the metric.
D. Modify the Lambda function to write the API operation name, response code, and version number as a log line to an Amazon CloudWatch Logs log grou
E. Configure a CloudWatch Logs Insights query topopulate CloudWatch metrics from the log line
F. Specify response code and application version as dimensions for the metric.
G. Configure the ALB access logs to write to an Amazon CloudWatch Logs log grou
H. Modify the Lambda function to respond to the ALB with the API operation name, response code, and version number as response metadat
I. Configure a CloudWatch Logs metric filter that increments a metric for each API operation nam
J. Specify response code and application version as dimensions for the metric.
K. Configure AWS X-Ray integration on the Lambda functio
L. Modify the Lambda function to create an X-Ray subsegment with the API operation name, response code, and version numbe
M. Configure X-Ray insights to extract an aggregated metric for each API operation name and to publish the metric to Amazon CloudWatc
N. Specify response code and application version as dimensions for the metric.

Answer: A

Explanation:
"Note that the metric filter is different from a log insights query, where the experience is interactive and provides immediate search results for the user to investigate. No automatic action can be invoked from an insights query. Metric filters, on the other hand, will generate metric data in the form of a time series. This lets you create alarms that integrate into your ITSM processes, execute AWS Lambda functions, or even create anomaly detection models."
https://aws.amazon.com/blogs/mt/quantify-custom-application-metrics-with-amazon-cloudwatch-logs-and-metri

NEW QUESTION 6
A DevOps engineer has automated a web service deployment by using AWS CodePipeline with the following steps:
1) An AWS CodeBuild project compiles the deployment artifact and runs unit tests.
2) An AWS CodeDeploy deployment group deploys the web service to Amazon EC2 instances in the staging environment.
3) A CodeDeploy deployment group deploys the web service to EC2 instances in the production environment. The quality assurance (QA) team requests permission to inspect the build artifact before the deployment to the
production environment occurs. The QA team wants to run an internal penetration testing tool to conduct
manual tests. The tool will be invoked by a REST API call.
Which combination of actions should the DevOps engineer take to fulfill this request? (Choose two.)

A. Insert a manual approval action between the test actions and deployment actions of the pipeline.
B. Modify the buildspec.yml file for the compilation stage to require manual approval before completion.
C. Update the CodeDeploy deployment groups so that they require manual approval to proceed.
D. Update the pipeline to directly call the REST API for the penetration testing tool.
E. Update the pipeline to invoke an AWS Lambda function that calls the REST API for the penetration testing tool.

Answer: AE

NEW QUESTION 7
A company runs an application on one Amazon EC2 instance. Application metadata is stored in Amazon S3 and must be retrieved if the instance is restarted. The instance must restart or relaunch automatically if the instance becomes unresponsive.
Which solution will meet these requirements?

A. Create an Amazon CloudWatch alarm for the StatusCheckFailed metri
B. Use the recover action to stop and start the instanc
C. Use an S3 event notification to push the metadata to the instance when the instance is back up and running.
D. Configure AWS OpsWorks, and use the auto healing feature to stop and start the instanc
E. Use a lifecycle event in OpsWorks to pull the metadata from Amazon S3 and update it on the instance.
F. Use EC2 Auto Recovery to automatically stop and start the instance in case of a failur
G. Use an S3 event notification to push the metadata to the instance when the instance is back up and running.
H. Use AWS CloudFormation to create an EC2 instance that includes the UserData property for the EC2 resourc
I. Add a command in UserData to retrieve the application metadata from Amazon S3.

Answer: B

Explanation:
https://aws.amazon.com/blogs/mt/how-to-set-up-aws-opsworks-stacks-auto-healing-notifications-in-amazon-clo

NEW QUESTION 8
A company is adopting AWS CodeDeploy to automate its application deployments for a Java-Apache Tomcat application with an Apache Webserver. The development team started with a proof of concept, created a deployment group for a developer environment, and performed functional tests within the application. After completion, the team will create additional deployment groups for staging and production.
The current log level is configured within the Apache settings, but the team wants to change this configuration dynamically when the deployment occurs, so that they can set different log level configurations depending on the deployment group without having a different application revision for each group.
How can these requirements be met with the LEAST management overhead and without requiring different script versions for each deployment group?

A. Tag the Amazon EC2 instances depending on the deployment grou
B. Then place a script into the application revision that calls the metadata service and the EC2 API to identify which deployment group the instance is part o
C. Use this information to configure the log level setting
D. Reference the script as part of the AfterInstall lifecycle hook in the appspec.yml file.
E. Create a script that uses the CodeDeploy environment variable DEPLOYMENT_GROUP_ NAME to identify which deployment group the instance is part o
F. Use this information to configure the log level setting
G. Reference this script as part of the BeforeInstall lifecycle hook in the appspec.yml file.
H. Create a CodeDeploy custom environment variable for each environmen
I. Then place a script into the application revision that checks this environment variable to identify which deployment group the instance is part o
J. Use this information to configure the log level setting
K. Reference this script as part of the ValidateService lifecycle hook in the appspec.yml file.
L. Create a script that uses the CodeDeploy environment variable DEPLOYMENT_GROUP_ID to identify which deployment group the instance is part of to configure the log level setting
M. Reference this script as part of the Install lifecycle hook in the appspec.yml file.

Answer: B

Explanation:
The following are the steps that the company can take to change the log level dynamically when the deployment occurs:
- Create a script that uses the CodeDeploy environment variable DEPLOYMENT_GROUP_NAME to identify which deployment group the instance is part of.
- Use this information to configure the log level settings.
- Reference this script as part of the BeforeInstall lifecycle hook in the appspec.yml file.

The DEPLOYMENT_GROUP_NAME environment variable is automatically set by CodeDeploy when the deployment is triggered. This means that the script does not need to call the metadata service or the EC2 API to identify the deployment group.
This solution is the least complex and requires the least management overhead. It also does not require different script versions for each deployment group.
The following are the reasons why the other options are not correct:
- Option A is incorrect because it would require tagging the Amazon EC2 instances, which would be a manual and time-consuming process.
- Option C is incorrect because it would require creating a custom environment variable for each

environment. This would be a complex and error-prone process.
- Option D is incorrect because it would use the DEPLOYMENT_GROUP_ID environment variable.

However, this variable is not automatically set by CodeDeploy, so the script would need to call the metadata service or the EC2 API to get the deployment group ID. This would add complexity and overhead to the solution.

NEW QUESTION 9
A company uses AWS CloudFormation stacks to deploy updates to its application. The stacks consist of different resources. The resources include AWS Auto Scaling groups, Amazon EC2 instances, Application Load Balancers (ALBs), and other resources that are necessary to launch and maintain independent stacks. Changes to application resources outside of CloudFormation stack updates are not allowed.
The company recently attempted to update the application stack by using the AWS CLI. The stack failed to update and produced the following error message: "ERROR: both the deployment and the CloudFormation stack rollback failed. The deployment failed because the following resource(s) failed to update: [AutoScalingGroup]."
The stack remains in a status of UPDATE_ROLLBACK_FAILED. * Which solution will resolve this issue?

A. Update the subnet mappings that are configured for the ALB

B. Run the aws cloudformation update-stack-set AWS CLI command.
C. Update the 1AM role by providing the necessary permissions to update the stac
D. Run the aws cloudformation continue-update-rollback AWS CLI command.
E. Submit a request for a quota increase for the number of EC2 instances for the accoun
F. Run the aws cloudformation cancel-update-stack AWS CLI command.
G. Delete the Auto Scaling group resourc
H. Run the aws cloudformation rollback-stack AWS CLI command.

Answer: B

Explanation:
https://repost.aws/knowledge-center/cloudformation-update-rollback-failed If your stack is stuck in the UPDATE_ROLLBACK_FAILED state after a failed update, then the only actions that you can perform on the stack are the ContinueUpdateRollback or DeleteStack operations.

NEW QUESTION 10
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 CodeDeplo
B. Install the CodeDeploy agent on the EC2 instances.
C. Create an application revision and a deployment group in AWS CodeDeplo
D. Create an environment in CodeDeplo
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 ste
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 ste
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 ste
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 10
A company uses Amazon S3 to store proprietary information. The development team creates buckets for new projects on a daily basis. The security team wants to ensure that all existing and future buckets have encryption logging and versioning enabled. Additionally, no buckets should ever be publicly read or write accessible.
What should a DevOps engineer do to meet these requirements?

A. Enable AWS CloudTrail and configure automatic remediation using AWS Lambda.
B. Enable AWS Conflg rules and configure automatic remediation using AWS Systems Manager documents.
C. Enable AWS Trusted Advisor and configure automatic remediation using Amazon EventBridge.
D. Enable AWS Systems Manager and configure automatic remediation using Systems Manager documents.

Answer: B

Explanation:
https://aws.amazon.com/blogs/mt/aws-config-auto-remediation-s3-compliance/ https://aws.amazon.com/blogs/aws/aws-config-rules-dynamic-compliance-checking-for-cloud-resources/

NEW QUESTION 15
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 productio
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 duster 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 deploymen
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 17
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 rul
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 rul
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 rul
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.Subscribe the security team's group email address to the queue.

Answer: ACE

NEW QUESTION 18
A video-sharing company stores its videos in Amazon S3. The company has observed a sudden increase in video access requests, but the company does not know which videos are most popular. The company needs to identify the general access pattern for the video files. This pattern includes the number of users who access a certain file on a given day, as well as the numb 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 togs The DevOps engineer manages the Kinesis consumer application, which also runs on Amazon EC2 Sudden increases of data cause the Kinesis consumer application to (all 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'' er of pull requests for certain files.
How can the company meet these requirements with the LEAST amount of effort?

A. Activate S3 server access loggin
B. Import the access logs into an Amazon Aurora databas
C. Use an Aurora SQL query to analyze the access patterns.
D. Activate S3 server access loggin
E. Use Amazon Athena to create an external table with the log file
F. Use Athena to create a SQL query to analyze the access patterns.
G. Invoke an AWS Lambda function for every S3 object access even
H. Configure the Lambda function to write the file access information, such as use
I. S3 bucket, and file key, to an Amazon Aurora databas
J. Use an Aurora SQL query to analyze the access patterns.
K. Record an Amazon CloudWatch Logs log message for every S3 object access even
L. Configure a CloudWatch Logs log stream to write the file access information, such as user, S3 bucket, and file key, to an Amazon Kinesis Data Analytics for SQL applicatio
M. Perform a sliding window analysis.

Answer: B

Explanation:
Activating S3 server access logging and using Amazon Athena to create an external table with the log files is the easiest and most cost-effective way to analyze access patterns. This option requires minimal setup and allows for quick analysis of the access patterns with SQL queries. Additionally, Amazon Athena scales automatically to match the query load, so there is no need for additional infrastructure provisioning or management.

NEW QUESTION 20
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 queu
B. Increase the Lambda function concurrency limit.
C. Check the ApproximateAgeOfOldestMessage metnc for the SQS queue Configure a redrive policy on the SQS queue.
D. Check the NumberOfMessagesSent metric for the SQS queu
E. Increase the SQS queue visibility timeout.
F. Check the WriteThrottleEvents metric for the DynamoDB tabl
G. Increase the maximum write capacity units (WCUs) for the table's scaling policy.
H. Check the Throttles metric for the Lambda functio
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 ThottledWriteRequests 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 21
A company requires that its internally facing web application be highly available. The architecture is made up of one Amazon EC2 web server instance and one NAT instance that provides outbound internet access for updates and accessing public data.
Which combination of architecture adjustments should the company implement to achieve high availability? (Choose two.)

A. Add the NAT instance to an EC2 Auto Scaling group that spans multiple Availability Zone
B. Update the route tables.
C. Create additional EC2 instances spanning multiple Availability Zone
D. Add an Application Load Balancer to split the load between them.
E. Configure an Application Load Balancer in front of the EC2 instanc
F. Configure Amazon CloudWatch alarms to recover the EC2 instance upon host failure.
G. Replace the NAT instance with a NAT gateway in each Availability Zon
H. Update the route tables.
I. Replace the NAT instance with a NAT gateway that spans multiple Availability Zone
J. Update the route tables.

Answer: BD

Explanation:
https://docs.aws.amazon.com/vpc/latest/userguide/vpc-nat-gateway.html

NEW QUESTION 22
A company's DevOps engineer is working in a multi-account environment. The company uses AWS Transit Gateway to route all outbound traffic through a network operations account. In the network operations account all account traffic passes through a firewall appliance for inspection before the traffic goes to an internet gateway.
The firewall appliance sends logs to Amazon CloudWatch Logs and includes event seventies of CRITICAL, HIGH, MEDIUM, LOW, and INFO. The security team wants to receive an alert if any CRITICAL events occur.
What should the DevOps engineer do to meet these requirements?

A. Create an Amazon CloudWatch Synthetics canary to monitor the firewall stat
B. If the firewall reaches a CRITICAL state or logs a CRITICAL event use a CloudWatch alarm to publish a notification to an Amazon Simple Notification Service (Amazon SNS) topic Subscribe the security team's email address to the topic.
C. Create an Amazon CloudWatch metric filter by using a search for CRITICAL events Publish a custom metric for the findin
D. Use a CloudWatch alarm based on the custom metric to publish a notification to an Amazon Simple Notification Service (Amazon SNS) topi
E. Subscribe the security team's email address to the topic.
F. Enable Amazon GuardDuty in the network operations accoun
G. Configure GuardDuty to monitor flow logs Create an Amazon EventBridge event rule that is invoked by GuardDuty events that are CRITICAL Define an Amazon Simple Notification Service (Amazon SNS) topic as a target Subscribe the security team's email address to the topic.
H. Use AWS Firewall Manager to apply consistent policies across all account
I. Create an Amazon.EventBridge event rule that is invoked by Firewall Manager events that are CRITICAL Define an Amazon Simple Notification Service (Amazon SNS) topic as a target Subscribe the security team's email address to the topic.

Answer: B

Explanation:
"The firewall appliance sends logs to Amazon CloudWatch Logs and includes event severities of CRITICAL, HIGH, MEDIUM, LOW, and INFO"

NEW QUESTION 24
A company that uses electronic health records is running a fleet of Amazon EC2 instances with an Amazon Linux operating system. As part of patient privacy requirements, the company must ensure continuous compliance for patches for operating system and applications running on the EC2 instances.
How can the deployments of the operating system and application patches be automated using a default and custom repository?

A. Use AWS Systems Manager to create a new patch baseline including the custom repositor
B. Run the AWS-RunPatchBaseline document using the run command to verify and install patches.
C. Use AWS Direct Connect to integrate the corporate repository and deploy the patches using Amazon CloudWatch scheduled events, then use the CloudWatch dashboard to create reports.
D. Use yum-config-manager to add the custom repository under /etc/yum.repos.d and run yum-config-manager-enable to activate the repository.
E. Use AWS Systems Manager to create a new patch baseline including the corporate repositor
F. Run the AWS-AmazonLinuxDefaultPatchBaseline document using the run command to verify and install patches.

Answer: A

Explanation:
https://docs.aws.amazon.com/systems-manager/latest/userguide/patch-manager-how-it-works-alt-source-reposit

NEW QUESTION 27
A company has developed a serverless web application that is hosted on AWS. The application consists of Amazon S3. Amazon API Gateway, several AWS Lambda functions, and an Amazon RDS for MySQL database. The company is using AWS CodeCommit to store the source code. The source code is a combination of AWS Serverless Application Model (AWS SAM) templates and Python code.
A security audit and penetration test reveal that user names and passwords for authentication to the database are hardcoded within CodeCommit repositories. A DevOps engineer must implement a solution to automatically detect and prevent hardcoded secrets.
What is the MOST secure solution that meets these requirements?

A. Enable Amazon CodeGuru Profile
B. Decorate the handler function with @with_lambda_profiler().Manually review the recommendation repor

C. Write the secret to AWS Systems Manager Parameter Store as a secure strin
D. Update the SAM templates and the Python code to pull the secret from Parameter Store.
E. Associate the CodeCommit repository with Amazon CodeGuru Reviewe
F. Manually check the code review for any recommendation
G. Choose the option to protect the secre
H. Update the SAM templates and the Python code to pull the secret from AWS Secrets Manager.
I. Enable Amazon CodeGuru Profile
J. Decorate the handler function with @with_lambda_profiler().Manually review the recommendation repor
K. Choose the option to protect the secre
L. Update the SAM templates and the Python code to pull the secret from AWS Secrets Manager.
M. Associate the CodeCommit repository with Amazon CodeGuru Reviewe
N. Manually check the code review for any recommendation
O. Write the secret to AWS Systems Manager Parameter Store as a strin
P. Update the SAM templates and the Python code to pull the secret from Parameter Store.

Answer: B

Explanation:
https://docs.aws.amazon.com/codecommit/latest/userguide/how-to-amazon-codeguru-reviewer.html

NEW QUESTION 30
A company has developed an AWS Lambda function that handles orders received through an API. The company is using AWS CodeDeploy to deploy the Lambda function as the final stage of a CI/CD pipeline.
A DevOps engineer has noticed there are intermittent failures of the ordering API for a few seconds after deployment. After some investigation the DevOps engineer believes the failures are due to database changes not having fully propagated before the Lambda function is invoked
How should the DevOps engineer overcome this?

A. Add a BeforeAllowTraffic hook to the AppSpec file that tests and waits for any necessary database changes before traffic can flow to the new version of the Lambda function.
B. Add an AfterAllowTraffic hook to the AppSpec file that forces traffic to wait for any pending database changes before allowing the new version of the Lambda function to respond.
C. Add a BeforeAllowTraffic hook to the AppSpec file that tests and waits for any necessary database changes before deploying the new version of the Lambda function.
D. Add a validateService hook to the AppSpec file that inspects incoming traffic and rejects the payload if dependent services such as the database are not yet ready.

Answer: A

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

NEW QUESTION 31
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 instanc
B. Add the new stack to the Route 53 record set by using a hearth check to configure a failover routing policy.
C. Launch a replica environment of everything except Amazon RDS in a different AW
D. Region Create an RDS read replica in the new Region and configure the new stack to point to the local RDS DB instanc
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 ma different AWS Regio
G. In the event of an outage copy and restore the latest RDS snapshot from the primar
H. Region 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 Regio
J. Create an RDS read replica in the new Region and configure the new environment to point to the local RDS DB instanc
K. Add the new stack to the Route 53 record set by using a health check to configure a failover routing polic
L. In the event of an outage promote the read replica to primary.

Answer: D

NEW QUESTION 34
A company is deploying a new application that uses Amazon EC2 instances. The company needs a solution to query application logs and AWS account API activity Which solution will meet these requirements?

A. Use the Amazon CloudWatch agent to send logs from the EC2 instances to Amazon CloudWatch Logs Configure AWS CloudTrail to deliver the API logs to Amazon S3 Use CloudWatch to query both sets of logs.
B. Use the Amazon CloudWatch agent to send logs from the EC2 instances to Amazon CloudWatch Logs Configure AWS CloudTrail to deliver the API logs to CloudWatch Logs Use CloudWatch Logs Insights to query both sets of logs.
C. Use the Amazon CloudWatch agent to send logs from the EC2 instances to Amazon Kinesis Configure AWS CloudTrail to deliver the API logs to Kinesis Use Kinesis to load the data into Amazon Redshift Use Amazon Redshift to query both sets of logs.
D. Use the Amazon CloudWatch agent to send logs from the EC2 instances to Amazon S3 Use AWS CloudTrail to deliver the API togs to Amazon S3 Use Amazon Athena to query both sets of logs in Amazon S3.

Answer: D

Explanation:

This solution will meet the requirements because it will use Amazon S3 as a common data lake for both the application logs and the API logs. Amazon S3 is a service that provides scalable, durable, and secure object storage for any type of data. You can use the Amazon CloudWatch agent to send logs from your EC2 instances to S3 buckets, and use AWS CloudTrail to deliver the API logs to S3 buckets as well. You can also use Amazon Athena to query both sets of logs in S3 using standard SQL, without loading or transforming them. Athena is a serverless interactive query service that allows you to analyze data in S3 using a variety of data formats, such as JSON, CSV, Parquet, and ORC.

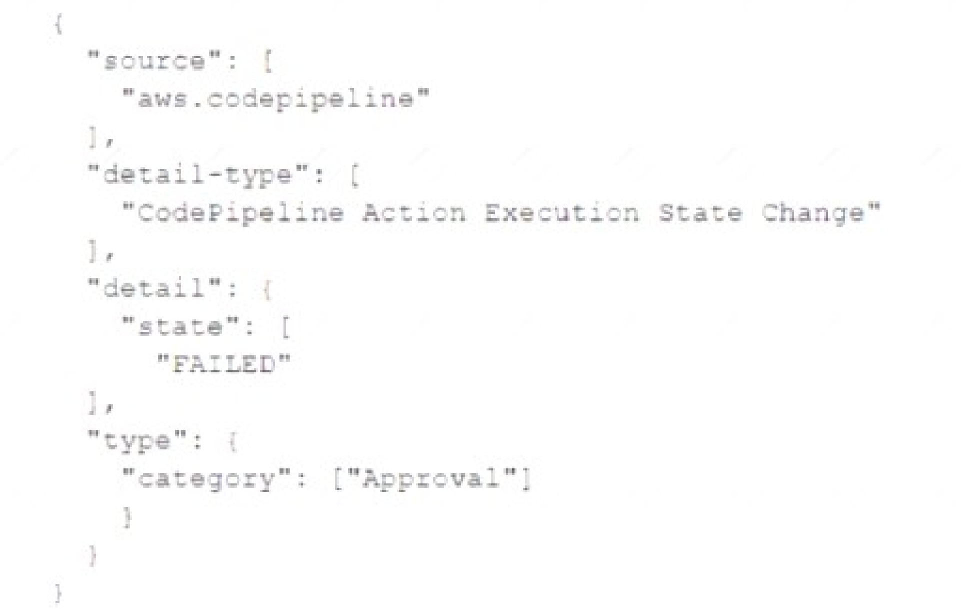
NEW QUESTION 35
A company recently migrated its legacy application from on-premises to AWS. The application is hosted on Amazon EC2 instances behind an Application Load Balancer which is behind Amazon API Gateway. The company wants to ensure users experience minimal disruptions during any deployment of a new version of the application. The company also wants to ensure it can quickly roll back updates if there is an issue.
Which solution will meet these requirements with MINIMAL changes to the application?

A. Introduce changes as a separate environment parallel to the existing one Configure API Gateway to use a canary release deployment to send a small subset of user traffic to the new environment.
B. Introduce changes as a separate environment parallel to the existing one Update the application's DNS alias records to point to the new environment.
C. Introduce changes as a separate target group behind the existing Application Load Balancer Configure API Gateway to route user traffic to the new target group in steps.
D. Introduce changes as a separate target group behind the existing Application Load Balancer ConfigureAPI Gateway to route all traffic to the Application Load Balancer which then sends the traffic to the new target group.

Answer: A

Explanation:
API Gateway supports canary deployment on a deployment stage before you direct all traffic to that stage. A parallel environment means we will create a new ALB and a target group that will target a new set of EC2 instances on which the newer version of the app will be deployed. So the canary setting associated to the new version of the API will connect with the new ALB instance which in turn will direct the traffic to the new EC2 instances on which the newer version of the application is deployed.

NEW QUESTION 37
A company is implementing AWS CodePipeline to automate its testing process The company wants to be notified when the execution state fails and used the following custom event pattern in Amazon EventBridge:



```
{
  "source": [
    "aws.codepipeline"
  ],
  "detail-type": [
    "CodePipeline Action Execution State Change"
  ],
  "detail": {
    "state": [
      "FAILED"
  ],
  "type": {
    "category": ["Approval"]
    }
  }
}
```

Which type of events will match this event pattern?

A. Failed deploy and build actions across all the pipelines
B. All rejected or failed approval actions across all the pipelines
C. All the events across all pipelines
D. Approval actions across all the pipelines

Answer: B

Explanation:
Action-level states in events Action state Description
STARTED The action is currently running. SUCCEEDED The action was completed successfully.
FAILED For Approval actions, the FAILED state means the action was either rejected by the reviewer or failed due to an incorrect action configuration.
CANCELED The action was canceled because the pipeline structure was updated.

NEW QUESTION 42
A company has enabled all features for its organization in AWS Organizations. The organization contains 10 AWS accounts. The company has turned on AWS CloudTrail in all the accounts. The company expects the number of AWS accounts in the organization to increase to 500 during the next year. The company plans to use multiple OUs for these accounts.
The company has enabled AWS Config in each existing AWS account in the organization. A DevOps engineer must implement a solution that enables AWS Config automatically for all future AWS accounts that are created in the organization.
Which solution will meet this requirement?

A. In the organization's management account, create an Amazon EventBridge rule that reacts to a CreateAccount API cal
B. Configure the rule to invoke an AWS Lambda function that enables trusted access to AWS Config for the organization.
C. In the organization's management account, create an AWS CloudFormation stack set to enable AWS Confi
D. Configure the stack set to deploy automatically when an account is created through Organizations.
E. In the organization's management account, create an SCP that allows the appropriate AWS Config API calls to enable AWS Confi
F. Apply the SCP to the root-level OU.
G. In the organization's management account, create an Amazon EventBridge rule that reacts to a CreateAccount API cal
H. Configure the rule to invoke an AWS Systems Manager Automation runbook to enable AWS Config for the account.

Answer: B

NEW QUESTION 47
A company has containerized all of its in-house quality control applications. The company is running Jenkins on Amazon EC2 instances, which require patching and upgrading. The compliance officer has requested a DevOps engineer begin encrypting build artifacts since they contain company intellectual property. What should the DevOps engineer do to accomplish this in the MOST maintainable manner?

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

Answer: D

Explanation:
The following are the steps involved in accomplishing this in the most maintainable manner:
- Configure CodeBuild to encrypt the build artifacts using AWS Secrets Manager.
- Deploy the containerized quality control applications to CodeBuild.

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

NEW QUESTION 49
A company wants to use a grid system for a proprietary enterprise m-memory data store on top of AWS. This system can run in multiple server nodes in any Linux-based distribution. The system must be able to reconfigure the entire cluster every time a node is added or removed. When adding or removing nodes an /etc./cluster/nodes config file must be updated listing the IP addresses of the current node members of that cluster.
The company wants to automate the task of adding new nodes to a cluster. What can a DevOps engineer do to meet these requirements?

A. Use AWS OpsWorks Stacks to layer the server nodes of that cluste
B. Create a Chef recipe that populates the content of the 'etc./cluster/nodes config file and restarts the service by using the current members of the laye
C. Assign that recipe to the Configure lifecycle event.
D. Put the file nodes config in version contro
E. Create an AWS CodeDeploy deployment configuration and deployment group based on an Amazon EC2 tag value for thecluster node
F. When adding a new node to the cluster update the file with all tagged instances and make a commit in version contro
G. Deploy the new file and restart the services.
H. Create an Amazon S3 bucket and upload a version of the /etc./cluster/nodes config file Create a crontab script that will poll for that S3 file and download it frequentl
I. Use a process manager such as Monit or system, to restart the cluster services when it detects that the new file was modifie
J. When adding a node to the cluster edit the file's most recent members Upload the new file to the S3 bucket.
K. Create a user data script that lists all members of the current security group of the cluster and automatically updates the /etc/cluster/. nodes confi
L. Tile whenever a new instance is added to the cluster.

Answer: A

Explanation:
You can run custom recipes manually, but the best approach is usually to have AWS OpsWorks Stacks run them automatically. Every layer has a set of built-in recipes assigned each of five lifecycle events—Setup, Configure, Deploy, Undeploy, and Shutdown. Each time an event occurs for an instance, AWS OpsWorks Stacks runs the associated recipes for each of the instance's layers, which handle the corresponding tasks. For example, when an instance finishes booting, AWS OpsWorks Stacks triggers a Setup event. This event runs the associated layer's Setup recipes, which typically handle tasks such as installing and configuring packages

NEW QUESTION 51
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 togs. The DevOps engineer manages the Kinesis consumer application, which also runs on Amazon EC2.
Sudden increases of data cause the Kinesis consumer application to (all 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 functio
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 53

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 decommissione
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 even
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 even
G. Configure the alarm to send to an Amazon Simple Queue Service (Amazon SQS) queu
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 functio
J. Configure the function to add a tag to the EC2 instance that produced the login event and mark the instance to be decommissioned.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 58
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 bucke
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.Wait for DNS propagation to become complete.

Answer: D

NEW QUESTION 59
A company is testing a web application that runs on Amazon EC2 instances behind an Application Load Balancer. The instances run in an Auto Scaling group across multiple Availability Zones. The company uses a blue green deployment process with immutable instances when deploying new software.
During testing users are being automatically logged out of the application at random times. Testers also report that when a new version of the application is deployed all users are logged out. The development team needs a solution to ensure users remain logged m across scaling events and application deployments.
What is the MOST operationally efficient way to ensure users remain logged in?

A. Enable smart sessions on the load balancer and modify the application to check tor an existing session.
B. Enable session sharing on the toad balancer and modify the application to read from the session store.
C. Store user session information in an Amazon S3 bucket and modify the application to read session information from the bucket.
D. Modify the application to store user session information in an Amazon ElastiCache cluster.

Answer: D

Explanation:
https://aws.amazon.com/caching/session-management/

NEW QUESTION 64
A DevOps engineer is working on a data archival project that requires the migration of on-premises data to an Amazon S3 bucket. The DevOps engineer develops a script that incrementally archives on-premises data that is older than 1 month to Amazon S3. Data that is transferred to Amazon S3 is deleted from the on-premises location The script uses the S3 PutObject operation.
During a code review the DevOps engineer notices that the script does not verity whether the data was successfully copied to Amazon S3. The DevOps engineer must update the script to ensure that data is not corrupted during transmission. The script must use MD5 checksums to verify data integrity before the on-premises data is deleted.
Which solutions for the script will meet these requirements'? (Select TWO.)

A. Check the returned response for the Versioned Compare the returned Versioned against the MD5 checksum.
B. Include the MD5 checksum within the Content-MD5 paramete
C. Check the operation call's return status to find out if an error was returned.
D. Include the checksum digest within the tagging parameter as a URL query parameter.
E. Check the returned response for the ETa
F. Compare the returned ETag against the MD5 checksum.
G. Include the checksum digest within the Metadata parameter as a name-value pair After upload use the S3 HeadObject operation to retrieve metadata from the object.

Answer: BD

Explanation:

https://docs.aws.amazon.com/AmazonS3/latest/userguide/checking-object-integrity.html

NEW QUESTION 69
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 dat
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 dat
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 customAMI for the cluster and use the latest AMI when creating instances.

Answer: D

NEW QUESTION 72
A global company manages multiple AWS accounts by using AWS Control Tower. The company hosts internal applications and public applications.
Each application team in the company has its own AWS account for application hosting. The accounts are consolidated in an organization in AWS Organizations.
One of the AWS Control Tower member accounts serves as a centralized DevOps account with CI/CD pipelines that application teams use to deploy applications to their respective target AWS accounts. An 1AM role for deployment exists in the centralized DevOps account.
An application team is attempting to deploy its application to an Amazon Elastic Kubernetes Service (Amazon EKS) cluster in an application AWS account. An 1AM role for deployment exists in the application AWS account. The deployment is through an AWS CodeBuild project that is set up in the centralized DevOps account. The CodeBuild project uses an 1AM service role for CodeBuild. The deployment is failing with an Unauthorized error during attempts to connect to the cross-account EKS cluster from CodeBuild.
Which solution will resolve this error?

A. Configure the application account's deployment 1AM role to have a trust relationship with the centralized DevOps accoun
B. Configure the trust relationship to allow the sts:AssumeRole actio
C. Configure the application account's deployment 1AM role to have the required access to the EKS cluste
D. Configure the EKS cluster aws-auth ConfigMap to map the role to the appropriate system permissions.
E. Configure the centralized DevOps account's deployment I AM role to have a trust relationship with the application accoun
F. Configure the trust relationship to allow the sts:AssumeRole actio
G. Configure the centralized DevOps account's deployment 1AM role to allow the required access to CodeBuild.
H. Configure the centralized DevOps account's deployment 1AM role to have a trust relationship with the application accoun
I. Configure the trust relationship to allow the sts:AssumeRoleWithSAML actio
J. Configure the centralized DevOps account's deployment 1AM role to allow the required access to CodeBuild.
K. Configure the application account's deployment 1AM role to have a trust relationship with the AWS Control Tower management accoun
L. Configure the trust relationship to allow the sts:AssumeRole actio
M. Configure the application account's deployment 1AM role to have the required access to the EKS cluste
N. Configure the EKS cluster aws-auth ConfigMap to map the role to the appropriate system permissions.

Answer: A

Explanation:
In the source AWS account, the IAM role used by the CI/CD pipeline should have permissions to access the source code repository, build artifacts, and any other resources required for the build process. In the destination AWS accounts, the IAM role used for deployment should have permissions to access the AWS resources required for deploying the application, such as EC2 instances, RDS databases, S3 buckets, etc. The exact permissions required will depend on the specific resources being used by the application. the IAM role used for deployment in the destination accounts should also have permissions to assume the IAM role for deployment in the centralized DevOps account. This is typically done using an IAM role trust policy that allows the destination account to assume the DevOps account role.

NEW QUESTION 76
A company’s security team requires that all external Application Load Balancers (ALBs) and Amazon API Gateway APIs are associated with AWS WAF web ACLs. The company has hundreds of AWS accounts, all of which are included in a single organization in AWS Organizations. The company has configured AWS Config for the organization. During an audit, the company finds some externally facing ALBs that are not associated with AWS WAF web ACLs.
Which combination of steps should a DevOps engineer take to prevent future violations? (Choose two.)

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

Answer: AC

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

NEW QUESTION 77
A company is building a new pipeline by using AWS CodePipeline and AWS CodeBuild in a build account. The pipeline consists of two stages. The first stage is a CodeBuild job to build and package an AWS Lambda function. The second stage consists of deployment actions that operate on two different AWS accounts a

development environment account and a production environment account. The deployment stages use the AWS Cloud Format ion action that CodePipeline invokes to deploy the infrastructure that the Lambda function requires.
A DevOps engineer creates the CodePipeline pipeline and configures the pipeline to encrypt build artifacts by using the AWS Key Management Service (AWS KMS) AWS managed key for Amazon S3 (the aws/s3 key). The artifacts are stored in an S3 bucket When the pipeline runs, the Cloud Formation actions fail with an access denied error.
Which combination of actions must the DevOps engineer perform to resolve this error? (Select TWO.)

A. Create an S3 bucket in each AWS account for the artifacts Allow the pipeline to write to the S3 buckets.Create a CodePipeline S3 action to copy the artifacts to the S3 bucket in each AWS account Update the CloudFormation actions to reference the artifacts S3 bucket in the production account.
B. Create a customer managed KMS key Configure the KMS key policy to allow the IAM roles used by the CloudFormation action to perform decrypt operations Modify the pipeline to use the customer managed KMS key to encrypt artifacts.
C. Create an AWS managed KMS key Configure the KMS key policy to allow the development account and the production account to perform decrypt operation
D. Modify the pipeline to use the KMS key to encrypt artifacts.
E. In the development account and in the production account create an IAM role for CodePipeline.Configure the roles with permissions to perform CloudFormation operations and with permissions to retrieve and decrypt objects from the artifacts S3 bucke
F. In the CodePipeline account configure the CodePipeline CloudFormation action to use the roles.
G. In the development account and in the production account create an IAM role for CodePipeline Configure the roles with permissions to perform CloudFormationoperations and with permissions to retrieve and decrypt objects from the artifacts S3 bucke
H. In the CodePipelme account modify the artifacts S3 bucket policy to allow the roles access Configure the CodePipeline CloudFormation action to use the roles.

Answer: BE

NEW QUESTION 78
A company updated the AWS Cloud Formation template for a critical business application. The stack update process failed due to an error in the updated template and AWS CloudFormation automatically began the stack rollback process Later a DevOps engineer discovered that the application was still unavailable and that the stack was in the UPDATE_ROLLBACK_FAILED state.
Which combination of actions should the DevOps engineer perform so that the stack rollback can complete successfully? (Select TWO.)

A. Attach the AWSC loud Formation FullAccess IAM policy to the AWS CtoudFormation 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 79
A business has an application that consists of five independent AWS Lambda functions.
The DevOps engineer has built a CI/CD pipeline using AWS CodePipeline and AWS CodeBuild that builds tests packages and deploys each Lambda function in sequence. The pipeline uses an Amazon EventBridge rule to ensure the pipeline starts as quickly as possible after a change is made to the application source code.
After working with the pipeline for a few months the DevOps engineer has noticed the pipeline takes too long to complete.
What should the DevOps engineer implement to BEST improve the speed of the pipeline?

A. Modify the CodeBuild projects within the pipeline to use a compute type with more available networkthroughput.
B. Create a custom CodeBuild execution environment that includes a symmetric multiprocessing configuration to run the builds in parallel.
C. Modify the CodePipeline configuration to run actions for each Lambda function in parallel by specifying the same runorder.
D. Modify each CodeBuild protect to run within a VPC and use dedicated instances to increase throughput.

Answer: C

Explanation:
https://docs.aws.amazon.com/codepipeline/latest/userguide/reference-pipeline-structure.html
AWS doc: "To specify parallel actions, use the same integer for each action you want to run in parallel. For example, if you want three actions to run in sequence in a stage, you would give the first action the runOrder value of 1, the second action the runOrder value of 2, and the third the runOrder value of 3. However, if you want the second and third actions to run in parallel, you would give the first action the runOrder value of 1 and both the second and third actions the runOrder value of 2."

NEW QUESTION 82
A DevOps engineer is building a multistage pipeline with AWS CodePipeline to build, verify, stage, test, and deploy an application. A manual approval stage is required between the test stage and the deploy stage. The development team uses a custom chat tool with webhook support that requires near-real-time notifications.
How should the DevOps engineer configure status updates for pipeline activity and approval requests to post to the chat tool?

A. Create an Amazon CloudWatch Logs subscription that filters on CodePipeline Pipeline Execution State Chang
B. Publish subscription events to an Amazon Simple Notification Service (Amazon SNS) topi
C. Subscribe the chat webhook URL to the SNS topic, and complete the subscription validation.
D. Create an AWS Lambda function that is invoked by AWS CloudTrail event
E. When a CodePipeline Pipeline Execution State Change event is detected, send the event details to the chat webhook URL.
F. Create an Amazon EventBridge rule that filters on CodePipeline Pipeline Execution State Change.Publish the events to an Amazon Simple Notification Service (Amazon SNS) topi
G. Create an AWS Lambda function that sends event details to the chat webhook UR
H. Subscribe the function to the SNS topic.
I. Modify the pipeline code to send the event details to the chat webhook URL at the end of each stage.Parameterize the URL so that each pipeline can send to a

different URL based on the pipeline environment.

Answer: C

Explanation:
https://aws.amazon.com/premiumsupport/knowledge-center/sns-lambda-webhooks-chime-slack-teams/

NEW QUESTION 83
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 loT 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 m 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 loT devices and on-premises infrastructure? (Select THREE.)

A. Apply tags lo all the EC2 instance
B. AWS loT Greengrass devices, and on-premises server
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 loT Greengrass devices and on-premises servers.
E. Use Systems Manager Patch Manager to schedule patching loT the EC2 instances AWS loT 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 lo initiate a patch action for all EC2 instances AWS loT 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 accoun
I. For the AWS loT 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 loT Greengrass IAM token exchange role Use the role to deploy SSM Agent on all the loT devices.

Answer: CEF

Explanation:
https://aws.amazon.com/blogs/mt/how-to-centrally-manage-aws-iot-greengrass-devices-using-aws-systems-man

NEW QUESTION 87
A company hosts a security auditing application in an AWS account. The auditing application uses an IAM role to access other AWS accounts. All the accounts are in the same organization in AWS Organizations.
A recent security audit revealed that users in the audited AWS accounts could modify or delete the auditing application's IAM role. The company needs to prevent any modification to the auditing application's IAM role by any entity other than a trusted administrator IAM role.
Which solution will meet these requirements?

A. Create an SCP that includes a Deny statement for changes to the auditing application's IAM role.Include a condition that allows the trusted administrator IAM role to make change
B. Attach the SCP to the root of the organization.
C. Create an SCP that includes an Allow statement for changes to the auditing application's IAM role by the trusted administrator IAM rol
D. Include a Deny statement for changes by all other IAM principal
E. Attach the SCP to the IAM service in each AWS account where the auditing application has an IAM role.
F. Create an IAM permissions boundary that includes a Deny statement for changes to the auditing application's IAM rol
G. Include a condition that allows the trusted administrator IAM role to make change
H. Attach the permissions boundary to the audited AWS accounts.
I. Create an IAM permissions boundary that includes a Deny statement for changes to the auditing application’s IAM rol
J. Include a condition that allows the trusted administrator IAM role to make change
K. Attach the permissions boundary to the auditing application's IAM role in the AWS accounts.

Answer: A

Explanation:
https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scps.html?icmpid=docs_org

NEW QUESTION 90
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 AuthorizeSecurityGroupIngres
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 Hu
D. Configure an Amazon EventBridge rule with a custom pattern that matches GuardDuty events with an output of NON_COMPLIAN
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 traffi
G. Configure automatic remediation to publish a message to an Amazon Simple Notification Service (Amazon SNS) topic.
H. Enable Amazon Inspecto
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 94
A development team is using AWS CodeCommit to version control application code and AWS CodePipeline to orchestrate software deployments. The team has decided to use a remote main branch as the trigger for the pipeline to integrate code changes. A developer has pushed code changes to the CodeCommit repository, but noticed that the pipeline had no reaction, even after 10 minutes.
Which of the following actions should be taken to troubleshoot this issue?

A. Check that an Amazon EventBridge rule has been created for the main branch to trigger the pipeline.
B. Check that the CodePipeline service role has permission to access the CodeCommit repository.
C. Check that the developer's IAM role has permission to push to the CodeCommit repository.
D. Check to see if the pipeline failed to start because of CodeCommit errors in Amazon CloudWatch Logs.

Answer: A

Explanation:
When you create a pipeline from CodePipeline during the step-by-step it creates a CloudWatch Event rule for a given branch and repo
like this:

```
{
"source": [ "aws.codecommit"
],
"detail-type": [
"CodeCommit Repository State Change"
],
"resources": [
"arn:aws:codecommit:us-east-1:xxxxx:repo-name"
],
"detail": {
"event": [ "referenceCreated", "referenceUpdated"
],
"referenceType": [ "branch"
],
"referenceName": [ "master"
]
}
}
```

https://docs.aws.amazon.com/codepipeline/latest/userguide/pipelines-trigger-source-repo-changes-console.html

NEW QUESTION 95
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 97
A company has an application that runs on Amazon EC2 instances that are in an Auto Scaling group. When the application starts up. the application needs to process data from an Amazon S3 bucket before the application can start to serve requests.
The size of the data that is stored in the S3 bucket is growing. When the Auto Scaling group adds new instances, the application now takes several minutes to download and process the data before the application can serve requests. The company must reduce the time that elapses before new EC2 instances are ready to serve requests.
Which solution is the MOST cost-effective way to reduce the application startup time?

A. Configure a warm pool for the Auto Scaling group with warmed EC2 instances in the Stopped state.Configure an autoscaling:EC2_INSTANCE_LAUNCHING lifecycle hook on the Auto Scaling grou
B. Modify the application to complete the lifecycle hook when the application is ready to serve requests.
C. Increase the maximum instance count of the Auto Scaling grou
D. Configure an autoscaling:EC2_INSTANCE_LAUNCHING lifecycle hook on the Auto Scaling grou
E. Modify the application to complete the lifecycle hook when the application is ready to serve requests.

F. Configure a warm pool for the Auto Scaling group with warmed EC2 instances in the Running state.Configure an autoscaling:EC2_INSTANCE_LAUNCHING lifecycle hook on the Auto Scaling grou
G. Modify the application to complete the lifecycle hook when the application is ready to serve requests.
H. Increase the maximum instance count of the Auto Scaling grou
I. Configure an autoscaling:EC2_INSTANCE_LAUNCHING lifecycle hook on the Auto Scaling grou
J. Modify the application to complete the lifecycle hook and to place the new instance in the Standby state when the application is ready to serve requests.

Answer: A

Explanation:
Option A is the most cost-effective solution. By configuring a warm pool of EC2 instances in the Stopped state, the company can reduce the time it takes for new instances to be ready to serve requests. When the Auto Scaling group launches a new instance, it can attach the stopped EC2 instance from the warm pool. The instance can then be started up immediately, rather than having to wait for the data to be downloaded and processed. This reduces the overall startup time for the application.

NEW QUESTION 100
A company hosts its staging website using an Amazon EC2 instance backed with Amazon EBS storage. The company wants to recover quickly with minimal data losses in the event of network connectivity issues or power failures on the EC2 instance.
Which solution will meet these requirements?

A. Add the instance to an EC2 Auto Scaling group with the minimum, maximum, and desired capacity set to 1.
B. Add the instance to an EC2 Auto Scaling group with a lifecycle hook to detach the EBS volume when the EC2 instance shuts down or terminates.
C. Create an Amazon CloudWatch alarm for the StatusCheckFailed System metric and select the EC2 action to recover the instance.
D. Create an Amazon CloudWatch alarm for the StatusCheckFailed Instance metric and select the EC2 action to reboot the instance.

Answer: C

Explanation:
https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-instance-recover.html

NEW QUESTION 102
A DevOps engineer is designing an application that integrates with a legacy REST API. The application has an AWS Lambda function that reads records from an Amazon Kinesis data stream. The Lambda function sends the records to the legacy REST API.
Approximately 10% of the records that the Lambda function sends from the Kinesis data stream have data errors and must be processed manually. The Lambda function event source configuration has an Amazon Simple Queue Service (Amazon SQS) dead-letter queue as an on-failure destination. The DevOps engineer has configured the Lambda function to process records in batches and has implemented retries in case of failure.
During testing the DevOps engineer notices that the dead-letter queue contains many records that have no data errors and that already have been processed by the legacy REST API. The DevOps engineer needs to configure the Lambda function's event source options to reduce the number of errorless records that are sent to the dead-letter queue.
Which solution will meet these requirements?

A. Increase the retry attempts
B. Configure the setting to split the batch when an error occurs
C. Increase the concurrent batches per shard
D. Decrease the maximum age of record

Answer: B

Explanation:
This solution will meet the requirements because it will reduce the number of errorless records that are sent to the dead-letter queue. When you configure the setting to split the batch when an error occurs, Lambda will retry only the records that caused the error, instead of retrying the entire batch. This way, the records that have no data errors and have already been processed by the legacy REST API will not be retried and sent to the dead-letter queue unnecessarily.
https://docs.aws.amazon.com/lambda/latest/dg/with-kinesis.html

NEW QUESTION 106
A company uses AWS CodePipeline pipelines to automate releases of its application A typical pipeline consists of three stages build, test, and deployment. The company has been using a separate AWS CodeBuild project to run scripts for each stage. However, the company now wants to use AWS CodeDeploy to handle the deployment stage of the pipelines.
The company has packaged the application as an RPM package and must deploy the application to a fleet of Amazon EC2 instances. The EC2 instances are in an EC2 Auto Scaling group and are launched from a common AMI.
Which combination of steps should a DevOps engineer perform to meet these requirements? (Choose two.)

A. Create a new version of the common AMI with the CodeDeploy agent installe
B. Update the IAM role of the EC2 instances to allow access to CodeDeploy.
C. Create a new version of the common AMI with the CodeDeploy agent installe
D. Create an AppSpec file that contains application deployment scripts and grants access to CodeDeploy.
E. Create an application in CodeDeplo
F. Configure an in-place deployment typ
G. Specify the Auto Scaling group as the deployment targe
H. Add a step to the CodePipeline pipeline to use EC2 Image Builder to create a new AM
I. Configure CodeDeploy to deploy the newly created AMI.
J. Create an application in CodeDeplo
K. Configure an in-place deployment typ
L. Specify the Auto Scaling group as the deployment targe
M. Update the CodePipeline pipeline to use the CodeDeploy action to deploy the application.
N. Create an application in CodeDeplo
O. Configure an in-place deployment typ
P. Specify the EC2 instances that are launched from the common AMI as the deployment targe
Q. Update the CodePipeline pipeline to use the CodeDeploy action to deploy the application.

Answer: AD

Explanation:
https://docs.aws.amazon.com/codedeploy/latest/userguide/integrations-aws-auto-scaling.html

NEW QUESTION 108
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