

AWS-Certified-DevOps-Engineer-Professional Dumps

Amazon AWS Certified DevOps Engineer Professional

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NEW QUESTION 1

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-cloudwatch-events/>

NEW QUESTION 2

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 ascript 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 3

A company is migrating its on-premises Windows applications and Linux applications to AWS. The company will use automation to launch Amazon EC2 instances to mirror the on- premises configurations. The migrated applications require access to shared storage that uses SMB for Windows and NFS for Linux.

The company is also creating a pilot light disaster recovery (DR) environment in another AWS Region. The company will use automation to launch and configure the EC2 instances in the DR Region. The company needs to replicate the storage to the DR Region.

Which storage solution will meet these requirements?

- A. Use Amazon S3 for the application storag
- B. Create an S3 bucket in the primary Region and an S3 bucket in the DR Regio
- C. Configure S3 Cross-Region Replication (CRR) from the primary Region to the DR Region.
- D. Use Amazon Elastic Block Store (Amazon EBS) for the application storag
- E. Create a backup plan in AWS Backup that creates snapshots of the EBS volumes that are in the primary Region and replicates the snapshots to the DR Region.
- F. Use a Volume Gateway in AWS Storage Gateway for the application storag
- G. Configure Cross-Region Replication (CRR) of the Volume Gateway from the primary Region to the DR Region.
- H. Use Amazon FSx for NetApp ONTAP for the application storag
- I. Create an FSx for ONTAP instance in the DR Regio
- J. Configure NetApp SnapMirror replication from the primary Region to the DR Region.

Answer: D

Explanation:

To meet the requirements of migrating its on-premises Windows and Linux applications to AWS and creating a pilot light DR environment in another AWS Region, the company should use Amazon FSx for NetApp ONTAP for the application storage. Amazon FSx for NetApp ONTAP is a fully managed service that provides highly reliable, scalable, high-performing, and feature-rich file storage built on NetApp's popular ONTAP file system. FSx for ONTAP supports multiple protocols, including SMB for Windows and NFS for Linux, so the company can access the shared storage from both types of applications. FSx for ONTAP also supports NetApp SnapMirror replication, which enables the company to replicate the storage to the DR Region. NetApp SnapMirror replication is efficient, secure, and incremental, and it preserves the data deduplication and compression benefits of FSx for ONTAP. The company can use automation to launch and configure the EC2 instances in the DR Region and then use NetApp SnapMirror to restore the data from the primary Region.

The other options are not correct because they do not meet the requirements or follow best practices. Using Amazon S3 for the application storage is not a good option because S3 is an object storage service that does not support SMB or NFS protocols natively. The company would need to use additional services or software to mount S3 buckets as file systems, which would add complexity and cost. Using Amazon EBS for the application storage is also not a good option because EBS is a block storage service that does not support SMB or NFS protocols natively. The company would need to set up and manage file servers on EC2 instances to provide shared access to the EBS volumes, which would add overhead and maintenance. Using a Volume Gateway in AWS Storage Gateway for the application storage is not a valid option because Volume Gateway does not support SMB protocol. Volume Gateway only supports iSCSI protocol, which means that only Linux applications can access the shared storage.

References:

? 1: What is Amazon FSx for NetApp ONTAP? - FSx for ONTAP

? 2: Amazon FSx for NetApp ONTAP

? 3: Amazon FSx for NetApp ONTAP | NetApp

? 4: AWS Announces General Availability of Amazon FSx for NetApp ONTAP

? : Replicating Data with NetApp SnapMirror - FSx for ONTAP

? : What Is Amazon S3? - Amazon Simple Storage Service

? : What Is Amazon Elastic Block Store (Amazon EBS)? - Amazon Elastic Compute Cloud

? : What Is AWS Storage Gateway? - AWS Storage Gateway

NEW QUESTION 4

A company has containerized all of its in-house quality control applications. The company is running Jenkins on Amazon EC2 instances, which require patching and upgrading. The compliance officer has requested a DevOps engineer begin encrypting build artifacts since they contain company intellectual property.

What should the DevOps engineer do to accomplish this in the MOST maintainable manner?

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

Answer: D

Explanation:

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

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

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

? Deploy the containerized quality control applications to CodeBuild.

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

NEW QUESTION 5

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 runbook
- 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 state
- 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 6

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 cluste
- 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 cluste
- E. Create a custom ANY endpoint for the cluste
- 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 cluste
- 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 cluste
- K. Create a custom ANY endpoint for the cluste
- 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 7

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 templat
- C. Configure the template to require the successful invocation of the CodeBuild projec
- 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 CodeComm
- H. Modify the existing CodePipeline pipeline to not run the deploy steps if the build is started from a pull reques
- 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 update
- 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 8

A company is launching an application that stores raw data in an Amazon S3 bucket. Three applications need to access the data to generate reports. The data must be redacted differently for each application before the applications can access the data.

Which solution will meet these requirements?

- A. Create an S3 bucket for each applicatio
- B. Configure S3 Same-Region Replication (SRR) from the raw data's S3 bucket to each application's S3 bucke
- C. Configure each application to consume data from its own S3 bucket.
- D. Create an Amazon Kinesis data strea
- E. Create an AWS Lambda function that isinvoked by object creation events in the raw data's S3 bucke
- F. Program the Lambda function to redact data for each applicatio
- G. Publish the data on the Kinesis data strea
- H. Configure each application to consume data from the Kinesis data stream.
- I. For each application, create an S3 access point that uses the raw data's S3 bucket as the destinatio
- J. Create an AWS Lambda function that is invoked by object creation events in the raw data's S3 bucke
- K. Program the Lambda function to redact data for each applicatio
- L. Store the data in each application's S3 access poin
- M. Configure each application to consume data from its own S3 access point.
- N. Create an S3 access point that uses the raw data's S3 bucket as the destinatio
- O. For each application, create an S3 Object Lambda access point that uses the S3 access poin
- P. Configure the AWS Lambda function for each S3 Object Lambda access point to redact data when objects are retrieve
- Q. Configure each application to consume data from its own S3 Object Lambda access point.

Answer: D

Explanation:

? The best solution is to use S3 Object Lambda¹, which allows you to add your own code to S3 GET, LIST, and HEAD requests to modify and process data as it is returned to an application². This way, you can redact the data differently for each application without creating and storing multiple copies of the data or running proxies.

? The other solutions are less efficient or scalable because they require replicating the data to multiple buckets, streaming the data through Kinesis, or storing the data in S3 access points.

References: 1: Amazon S3 Features | Object Lambda | AWS 2: Transforming objects with S3 Object Lambda - Amazon Simple Storage Service

NEW QUESTION 9

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 10

A company has deployed an application in a production VPC in a single AWS account. The application is popular and is experiencing heavy usage. The company's security team wants to add additional security, such as AWS WAF, to the application deployment. However, the application's product manager is concerned about cost and does not want to approve the change unless the security team can prove that additional security is necessary.

The security team believes that some of the application's demand might come from users that have IP addresses that are on a deny list. The security team provides the deny list to a DevOps engineer. If any of the IP addresses on the deny list access the application, the security team wants to receive automated notification in near real time so that the security team can document that the application needs additional security. The DevOps engineer creates a VPC flow log for the production VPC.

Which set of additional steps should the DevOps engineer take to meet these requirements MOST cost-effectively?

- A. Create a log group in Amazon CloudWatch Log
- B. Configure the VPC flow log to capture accepted traffic and to send the data to the log group
- C. Create an Amazon CloudWatch metric filter for IP addresses on the deny list
- D. Create a CloudWatch alarm with the metric filter as input
- E. Set the period to 5 minutes and the datapoints to alarm to 1. Use an Amazon Simple Notification Service (Amazon SNS) topic to send alarm notices to the security team.
- F. Create an Amazon S3 bucket for log file
- G. Configure the VPC flow log to capture all traffic and to send the data to the S3 bucket
- H. Configure Amazon Athena to return all log files in the S3 bucket for IP addresses on the deny list
- I. Configure Amazon QuickSight to accept data from Athena and to publish the data as a dashboard that the security team can access
- J. Create a threshold alert of 1 for successful access
- K. Configure the alert to automatically notify the security team as frequently as possible when the alert threshold is met.
- L. Create an Amazon S3 bucket for log file
- M. Configure the VPC flow log to capture accepted traffic and to send the data to the S3 bucket
- N. Configure an Amazon OpenSearch Service cluster and domain for the log file
- O. Create an AWS Lambda function to retrieve the logs from the S3 bucket, format the logs, and load the logs into the OpenSearch Service cluster
- P. Schedule the Lambda function to run every 5 minutes
- Q. Configure an alert and condition in OpenSearch Service to send alerts to the security team through an Amazon Simple Notification Service (Amazon SNS) topic when access from the IP addresses on the deny list is detected.
- R. Create a log group in Amazon CloudWatch Log
- S. Create an Amazon S3 bucket to hold query results
- T. Configure the VPC flow log to capture all traffic and to send the data to the log group
- . Deploy an Amazon Athena CloudWatch connector in AWS Lambda
- . Connect the connector to the log group
- . Configure Athena to periodically query for all accepted traffic from the IP addresses on the deny list and to store the results in the S3 bucket
- . Configure an S3 event notification to automatically notify the security team through an Amazon Simple Notification Service (Amazon SNS) topic when new objects are added to the S3 bucket.

Answer: A

NEW QUESTION 10

A development team uses AWS CodeCommit for version control for applications. The development team uses AWS CodePipeline, AWS CodeBuild, and AWS CodeDeploy for CI/CD infrastructure. In CodeCommit, the development team recently merged pull requests that did not pass long-running tests in the code base. The development team needed to perform rollbacks to branches in the codebase, resulting in lost time and wasted effort.

A DevOps engineer must automate testing of pull requests in CodeCommit to ensure that reviewers more easily see the results of automated tests as part of the pull request review.

What should the DevOps engineer do to meet this requirement?

- A. Create an Amazon EventBridge rule that reacts to the pullRequestStatusChanged event
- B. Create an AWS Lambda function that invokes a CodePipeline pipeline with a CodeBuild action that runs the tests for the application
- C. Program the Lambda function to post the CodeBuild badge as a comment on the pull request so that developers will see the badge in their code review.
- D. Create an Amazon EventBridge rule that reacts to the pullRequestCreated event
- E. Create an AWS Lambda function that invokes a CodePipeline pipeline with a CodeBuild action that runs the tests for the application

- F. Program the Lambda function to post the CodeBuild test results as a comment on the pull request when the test results are complete.
- G. Create an Amazon EventBridge rule that reacts to pullRequestCreated and pullRequestSourceBranchUpdated event
- H. Create an AWS Lambda function that invokes a CodePipeline pipeline with a CodeBuild action that runs the tests for the applicatio
- I. Program the Lambda function to post the CodeBuild badge as a comment on the pull request so that developers will see the badge in their code review.
- J. Create an Amazon EventBridge rule that reacts to the pullRequestStatusChanged even
- K. Create an AWS Lambda function that invokes a CodePipeline pipeline with a CodeBuild action that runs the tests for the applicatio
- L. Program the Lambda function to post the CodeBuild test results as a comment on the pull request when the test results are complete.

Answer: C

Explanation:

<https://aws.amazon.com/es/blogs/devops/complete-ci-cd-with-aws-codecommit-aws-codebuild-aws-codedeploy-and-aws-codepipeline/>

NEW QUESTION 12

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 strea
- B. Subscribe the log group to the data strea
- C. Configure Amazon Kinesis Data Analytics to detect log anomalies in the data strea
- D. Create anAWS Lambda function to use as the output of the data strea
- 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 bucke
- G. Subscribe the log group to the delivery strea
- H. Configure Amazon Lookout for Metrics to monitor the data in the S3 bucket for anomalie
- 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 anomalie
- L. Configure the Lambda function to publish an event to the default Amazon EventBridge event bus if the Lambda function detects an anomal
- M. Subscribe the Lambda function to the log group.
- N. Create an Amazon Kinesis data strea
- O. Subscribe the log group to the data strea
- P. Create an AWS Lambda function to detect log anomalie
- Q. Configure the Lambda function to write to the default Amazon EventBridge event bus if the Lambda function detects an anomal
- 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 16

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 1AM 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 1AM 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 toke
- 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 projec
- D. In the environment variable, include the ARN of the CodeBuild project's IAM service rol
- 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 repositor
- G. Add an ECR repository policy that allows the 1AM service role to have access.
- H. Update the buildspec.yml file to use the AWS CLI to assume the 1AM service role for ECR operation
- I. Add an ECR repository policy that allows the 1AM 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 20

A DevOps engineer is planning to deploy a Ruby-based application to production. The application needs to interact with an Amazon RDS for MySQL database and

should have automatic scaling and high availability. The stored data in the database is critical and should persist regardless of the state of the application stack. The DevOps engineer needs to set up an automated deployment strategy for the application with automatic rollbacks. The solution also must alert the application team when a deployment fails.

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

- A. Deploy the application on AWS Elastic Beanstalk
- B. Deploy an Amazon RDS for MySQL DB instance as part of the Elastic Beanstalk configuration.
- C. Deploy the application on AWS Elastic Beanstalk
- D. Deploy a separate Amazon RDS for MySQL DB instance outside of Elastic Beanstalk.
- E. Configure a notification email address that alerts the application team in the AWS Elastic Beanstalk configuration.
- F. Configure an Amazon EventBridge rule to monitor AWS Health event
- G. Use an Amazon Simple Notification Service (Amazon SNS) topic as a target to alert the application team.
- H. Use the immutable deployment method to deploy new application versions.
- I. Use the rolling deployment method to deploy new application versions.

Answer: BDE

Explanation:

For deploying a Ruby-based application with requirements for interaction with an Amazon RDS for MySQL database, automatic scaling, high availability, and data persistence, the following steps will meet the requirements:

? B. Deploy the application on AWS Elastic Beanstalk. Deploy a separate Amazon

RDS for MySQL DB instance outside of Elastic Beanstalk. This approach ensures that the database persists independently of the Elastic Beanstalk environment, which can be torn down and recreated without affecting the database¹²³.

? E. Use the immutable deployment method to deploy new application

versions. Immutable deployments provide a zero-downtime deployment method that ensures that if any part of the deployment process fails, the environment is rolled back to the original state automatically⁴.

? D. Configure an Amazon EventBridge rule to monitor AWS Health events. Use an

Amazon Simple Notification Service (Amazon SNS) topic as a target to alert the application team. This setup allows for automated monitoring and alerting of the application team in case of deployment failures or other health events⁵⁶.

References:

? AWS Elastic Beanstalk documentation on deploying Ruby applications¹.

? AWS documentation on application auto-scaling⁷.

? AWS documentation on automated deployment strategies with automatic rollbacks and alerts⁴⁵⁶.

NEW QUESTION 23

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 26

A company has an on-premises application that is written in Go. A DevOps engineer must move the application to AWS. The company's development team wants to enable blue/green deployments and perform A/B testing.

Which solution will meet these requirements?

- A. Deploy the application on an Amazon EC2 instance, and create an AMI of the instance
- B. Use the AMI to create an automatic scaling launch configuration that is used in an Auto Scaling group
- C. Use Elastic Load Balancing to distribute traffic
- D. When changes are made to the application, a new AMI will be created, which will initiate an EC2 instance refresh.
- E. Use Amazon Lightsail to deploy the application
- F. Store the application in a zipped format in an Amazon S3 bucket
- G. Use this zipped version to deploy new versions of the application to Lightsail
- H. Use Lightsail deployment options to manage the deployment.
- I. Use AWS CodeArtifact to store the application code

- J. Use AWS CodeDeploy to deploy the application to a fleet of Amazon EC2 instance
- K. Use Elastic Load Balancing to distribute the traffic to the EC2 instance
- L. When making changes to the application, upload a new version to CodeArtifact and create a new CodeDeploy deployment.
- M. Use AWS Elastic Beanstalk to host the applicatio
- N. Store a zipped version of the application in Amazon S3. Use that location to deploy new versions of the applicatio
- O. Use Elastic Beanstalk to manage the deployment options.

Answer: D

Explanation:

<https://aws.amazon.com/quickstart/architecture/blue-green-deployment/>

NEW QUESTION 27

An AWS CodePipeline pipeline has implemented a code release process. The pipeline is integrated with AWS CodeDeploy to deploy versions of an application to multiple Amazon EC2 instances for each CodePipeline stage.

During a recent deployment the pipeline failed due to a CodeDeploy issue. The DevOps team wants to improve monitoring and notifications during deployment to decrease resolution times.

What should the DevOps engineer do to create notifications. When issues are discovered?

- A. Implement Amazon CloudWatch Logs for CodePipeline and CodeDeploy create an AWS Config rule to evaluate code deployment issues, and create an Amazon Simple Notification Service (Amazon SNS) topic to notify stakeholders of deployment issues.
- B. Implement Amazon EventBridge for CodePipeline and CodeDeploy create an AWS Lambda function to evaluate code deployment issues, and create an Amazon Simple Notification Service (Amazon SNS) topic to notify stakeholders of deployment issues.
- C. Implement AWS CloudTrail to record CodePipeline and CodeDeploy API call information create an AWS Lambda function to evaluate code deployment issues and create an Amazon Simple Notification Service (Amazon SNS) topic to notify stakeholders of deployment issues.
- D. Implement Amazon EventBridge for CodePipeline and CodeDeploy create an Amazo
- E. Inspector assessment target to evaluate code deployment issues and create an Amazon Simpl
- F. Notification Service (Amazon SNS) topic to notify stakeholders of deployment issues.

Answer: B

Explanation:

AWS CloudWatch Events can be used to monitor events across different AWS resources, and a CloudWatch Event Rule can be created to trigger an AWS Lambda function when a deployment issue is detected in the pipeline. The Lambda function can then evaluate the issue and send a notification to the appropriate stakeholders through an Amazon SNS topic. This approach allows for real-time notifications and faster resolution times.

NEW QUESTION 29

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. Down load 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 30

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-repository.html>

NEW QUESTION 35

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.IteratorAge.Milliseconds 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.IteratorAge.Milliseconds - 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 39

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 43

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 resource.
- 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 resource.
- 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 resource.
- J. Enable AWS Security Hub with the `~no-enable-default-standards` option in all the AWS account.
- K. Set up AWS Config managed rules and custom rule.
- L. Set up automatic remediation by using AWS Config conformance pack.
- 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 resource.
- 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 44

A company is implementing an Amazon Elastic Container Service (Amazon ECS) cluster to run its workload. The company architecture will run multiple ECS services on the cluster. The architecture includes an Application Load Balancer on the front end and uses multiple target groups to route traffic.

A DevOps engineer must collect application and access logs. The DevOps engineer then needs to send the logs to an Amazon S3 bucket for near-real-time analysis.

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

- A. Download the Amazon CloudWatch Logs container instance from AWS
- B. Configure this instance as a task
- C. Update the application service definitions to include the logging task.
- D. Install the Amazon CloudWatch Logs agent on the ECS instance
- E. Change the logging driver in the ECS task definition to awslogs.
- F. Use Amazon EventBridge to schedule an AWS Lambda function that will run every 60 seconds and will run the Amazon CloudWatch Logs create-export-task command
- G. Then point the output to the logging S3 bucket.
- H. Activate access logging on the ALB
- I. Then point the ALB directly to the logging S3 bucket.
- J. Activate access logging on the target groups that the ECS services use
- K. Then send the logs directly to the logging S3 bucket.
- L. Create an Amazon Kinesis Data Firehose delivery stream that has a destination of the logging S3 bucket
- M. Then create an Amazon CloudWatch Logs subscription filter for Kinesis Data Firehose.

Answer: BDF

Explanation:

<https://docs.aws.amazon.com/AmazonECS/latest/developerguide/ecs-logging-monitoring.html>

NEW QUESTION 47

A company uses AWS Directory Service for Microsoft Active Directory as its identity provider (IdP). The company requires all infrastructure to be defined and deployed by AWS CloudFormation.

A DevOps engineer needs to create a fleet of Windows-based Amazon EC2 instances to host an application. The DevOps engineer has created a CloudFormation template that contains an EC2 launch template, IAM role, EC2 security group, and EC2 Auto Scaling group. The DevOps engineer must implement a solution that joins all EC2 instances to the domain of the AWS Managed Microsoft AD directory.

Which solution will meet these requirements with the MOST operational efficiency?

- A. In the CloudFormation template, create an AWS::SSM::Document resource that joins the EC2 instance to the AWS Managed Microsoft AD domain by using the parameters for the existing director
- B. Update the launch template to include the SSMAssociation property to use the new SSM document
- C. Attach the AmazonSSMManagedInstanceCore and AmazonSSMDirectoryServiceAccess AWS managed policies to the IAM role that the EC2 instances use.
- D. In the CloudFormation template, update the launch template to include specific tags that propagate on launch
- E. Create an AWS::SSM::Association resource to associate the AWS- JoinDirectoryServiceDomain Automation runbook with the EC2 instances that have the specified tag
- F. Define the required parameters to join the AWS Managed Microsoft AD director
- G. Attach the AmazonSSMManagedInstanceCore and AmazonSSMDirectoryServiceAccess AWS managed policies to the IAM role that the EC2 instances use.
- H. Store the existing AWS Managed Microsoft AD domain connection details in AWS Secrets Manager
- I. In the CloudFormation template, create an AWS::SSM::Association resource to associate the AWS-CreateManagedWindowsInstanceWithApproval Automation runbook with the EC2 Auto Scaling group
- J. Pass the ARNs for the parameters from Secrets Manager to join the domain
- K. Attach the AmazonSSMDirectoryServiceAccess and SecretsManagerReadWrite AWS managed policies to the IAM role that the EC2 instances use.
- L. Store the existing AWS Managed Microsoft AD domain administrator credentials in AWS Secrets Manager
- M. In the CloudFormation template, update the EC2 launch template to include user data

- N. Configure the user data to pull the administrator credentials from Secrets Manager and to join the AWS Managed Microsoft AD domain.
- O. Attach the AmazonSSMManagedInstanceCore and SecretsManagerReadWrite AWS managed policies to the IAM role that the EC2 instances use.

Answer: B

Explanation:

To meet the requirements, the DevOps engineer needs to create a solution that joins all EC2 instances to the domain of the AWS Managed Microsoft AD directory with the most operational efficiency. The DevOps engineer can use AWS Systems Manager Automation to automate the domain join process using an existing runbook called AWS- JoinDirectoryServiceDomain. This runbook can join Windows instances to an AWS Managed Microsoft AD or Simple AD directory by using PowerShell commands. The DevOps engineer can create an AWS::SSM::Association resource in the CloudFormation template to associate the runbook with the EC2 instances that have specific tags. The tags can be defined in the launch template and propagated on launch to the EC2 instances. The DevOps engineer can also define the required parameters for the runbook, such as the directory ID, directory name, and organizational unit. The DevOps engineer can attach the AmazonSSMManagedInstanceCore and AmazonSSMDirectoryServiceAccess AWS managed policies to the IAM role that the EC2 instances use. These policies grant the necessary permissions for Systems Manager and Directory Service operations.

NEW QUESTION 52

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 Region to the DR Region. Adjust the Route 53 record set to point to the ALB in the DR Region.
- H. Launch a replica environment of everything except Amazon RDS in a different AWS Region.
- I. Create an RDS read replica in the new Region and configure the new environment to point to the local RDS DB instance.
- J. Add the new stack to the Route 53 record set by using a health check to configure a failover routing policy.
- K. In the event of an outage, promote the read replica to primary.

Answer: D

NEW QUESTION 57

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-hooks-lambda>

NEW QUESTION 58

A company has an application that includes AWS Lambda functions. The Lambda functions run Python code that is stored in an AWS CodeCommit repository. The company has recently experienced failures in the production environment because of an error in the Python code. An engineer has written unit tests for the Lambda functions to help avoid releasing any future defects into the production environment.

The company's DevOps team needs to implement a solution to integrate the unit tests into an existing AWS CodePipeline pipeline. The solution must produce reports about the unit tests for the company to view.

Which solution will meet these requirements?

- A. Associate the CodeCommit repository with Amazon CodeGuru Reviewer.
- B. Create a new AWS CodeBuild project.
- C. In the CodePipeline pipeline, configure a test stage that uses the new CodeBuild project.
- D. Create a buildspec.yml file in the CodeCommit repository.
- E. In the buildspec.yml file, define the actions to run a CodeGuru review.
- F. Create a new AWS CodeBuild project.
- G. In the CodePipeline pipeline, configure a test stage that uses the new CodeBuild project.
- H. Create a CodeBuild report group.
- I. Create a buildspec.yml file in the CodeCommit repository.
- J. In the buildspec.yml file, define the actions to run the unit tests with an output of JUNITXML in the build phase section. Configure the test reports to be uploaded to the new CodeBuild report group.
- K. Create a new AWS CodeArtifact repository.
- L. Create a new AWS CodeBuild project.

- M. In the CodePipeline pipeline, configure a test stage that uses the new CodeBuild project
- N. Create an appspec.yml file in the original CodeCommit repository
- O. In the appspec.yml file, define the actions to run the unit tests with an output of CUCUMBERJSON in the build phase section
- P. Configure the test reports to be sent to the new CodeArtifact repository.
- Q. Create a new AWS CodeBuild project
- R. In the CodePipeline pipeline, configure a test stage that uses the new CodeBuild project
- S. Create a new Amazon S3 bucket
- T. Create a buildspec.yml file in the CodeCommit repository
- . In the buildspec.yml file, define the actions to run the unit tests with an output of HTML in the phases section
- . In the reports section, upload the test reports to the S3 bucket.

Answer: B

Explanation:

The correct answer is B. Creating a new AWS CodeBuild project and configuring a test stage in the AWS CodePipeline pipeline that uses the new CodeBuild project is the best way to integrate the unit tests into the existing pipeline. Creating a CodeBuild report group and uploading the test reports to the new CodeBuild report group will produce reports about the unit tests for the company to view. Using JUNITXML as the output format for the unit tests is supported by CodeBuild and will generate a valid report. Option A is incorrect because Amazon CodeGuru Reviewer is a service that provides automated code reviews and recommendations for improving code quality and performance. It is not a tool for running unit tests or producing test reports. Therefore, option A will not meet the requirements.

Option C is incorrect because AWS CodeArtifact is a service that provides secure, scalable, and cost-effective artifact management for software development. It is not a tool for running unit tests or producing test reports. Moreover, option C uses CUCUMBERJSON as the output format for the unit tests, which is not supported by CodeBuild and will not generate a valid report.

Option D is incorrect because uploading the test reports to an Amazon S3 bucket is not the best way to produce reports about the unit tests for the company to view. CodeBuild has a built-in feature to create and manage test reports, which is more convenient and efficient than using S3. Furthermore, option D uses HTML as the output format for the unit tests, which is not supported by CodeBuild and will not generate a valid report.

NEW QUESTION 60

A company wants to use AWS CloudFormation for infrastructure deployment. The company has strict tagging and resource requirements and wants to limit the deployment to two Regions. Developers will need to deploy multiple versions of the same application.

Which solution ensures resources are deployed in accordance with company policy?

- A. Create AWS Trusted Advisor checks to find and remediate unapproved CloudFormation StackSets.
- B. Create a CloudFormation drift detection operation to find and remediate unapproved CloudFormation StackSets.
- C. Create CloudFormation StackSets with approved CloudFormation templates.
- D. Create AWS Service Catalog products with approved CloudFormation templates.

Answer: D

Explanation:

Service Catalog uses stacksets and can enforce tag and restrict resources AWS Customer case with tag enforcement

<https://aws.amazon.com/ko/blogs/apn/enforce-centralized-tag-compliance-using-aws-service-catalog-amazon-dynamodb-aws-lambda-and-amazon-cloudwatch-events/> And Youtube video showing how to restrict resources per user with portfolio <https://www.youtube.com/watch?v=LzvhTcqyqog>

NEW QUESTION 61

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 hour
- 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 one
- 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 Immutable
- 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 62

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

Which solution will accomplish this?

- A. Create an AWS CloudFormation template that defines an AWS Inspector rule to check whether EBS encryption is enabled
- B. Save the template to an Amazon S3 bucket that has been shared with all accounts within the company
- C. Update the account creation script pointing to the CloudFormation template in Amazon S3.
- D. Create an AWS Config organizational rule to check whether EBS encryption is enabled and deploy the rule using the AWS CLI
- E. Create and apply an SCP to prohibit stopping and deleting AWS Config across the organization.
- F. Create an SCP in Organization
- G. Set the policy to prevent the launch of Amazon EC2 instances without encryption on the EBS volumes using a conditional expression
- H. Apply the SCP to all AWS accounts

- I. Use Amazon Athena to analyze the AWS CloudTrail output, looking for events that deny an ec2: RunInstances action.
- J. Deploy an IAM role to all accounts from a single trusted account
- K. Build a pipeline with AWS CodePipeline with a stage in AWS Lambda to assume the IAM role, and list all EBS volumes in the account
- L. Publish a report to Amazon S3.

Answer: B

Explanation:

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

NEW QUESTION 65

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 state
- 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 state
- 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 state
- 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 state
- 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-58e06d7c0d6a>

NEW QUESTION 66

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 67

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 70

AnyCompany is using AWS Organizations to create and manage multiple AWS accounts. AnyCompany recently acquired a smaller company, Example Corp. During the acquisition process, Example Corp's single AWS account joined AnyCompany's management account through an Organizations invitation.

AnyCompany moved the new member account under an OU that is dedicated to Example Corp.

AnyCompany's DevOps engineer has an IAM user that assumes a role that is named OrganizationAccountAccessRole to access member accounts. This role is configured with a full access policy. When the DevOps engineer tries to use the AWS Management Console to assume the role in Example Corp's new member account, the DevOps engineer receives the following error message: "Invalid information in one or more fields. Check your information or contact your administrator."

Which solution will give the DevOps engineer access to the new member account?

- A. In the management account, grant the DevOps engineer's IAM user permission to assume the OrganizationAccountAccessRole IAM role in the new member account.
- B. In the management account, create a new SCP. In the SCP, grant the DevOps engineer's IAM user full access to all resources in the new member account.
- C. Attach the SCP to the OU that contains the new member account.
- D. In the new member account, create a new IAM role that is named OrganizationAccountAccessRole.
- E. Attach the AdministratorAccess AWS managed policy to the role.
- F. In the role's trust policy, grant the management account permission to assume the role.
- G. In the new member account, edit the trust policy for the OrganizationAccountAccessRole IAM role.
- H. Grant the management account permission to assume the role.

Answer: C

Explanation:

The problem is that the DevOps engineer cannot assume the OrganizationAccountAccessRole IAM role in the new member account that joined AnyCompany's management account through an Organizations invitation. The solution is to create a new IAM role with the same name and trust policy in the new member account.

? Option A is incorrect, as it does not address the root cause of the error. The DevOps engineer's IAM user already has permission to assume the OrganizationAccountAccessRole IAM role in any member account, as this is the default role name that AWS Organizations creates when a new account joins an organization. The error occurs because the new member account does not have this role, as it was not created by AWS Organizations.

? Option B is incorrect, as it does not address the root cause of the error. An SCP is a policy that defines the maximum permissions for account members of an organization or organizational unit (OU). An SCP does not grant permissions to IAM users or roles, but rather limits the permissions that identity-based policies or resource-based policies grant to them. An SCP also does not affect how IAM roles are assumed by other principals.

? Option C is correct, as it addresses the root cause of the error. By creating a new IAM role with the same name and trust policy as the OrganizationAccountAccessRole IAM role in the new member account, the DevOps engineer can assume this role and access the account. The new role should have the AdministratorAccess AWS managed policy attached, which grants full access to all AWS resources in the account. The trust policy should allow the management account to assume the role, which can be done by specifying the management account ID as a principal in the policy statement.

? Option D is incorrect, as it assumes that the new member account already has the OrganizationAccountAccessRole IAM role, which is not true. The new member account does not have this role, as it was not created by AWS Organizations. Editing the trust policy of a non-existent role will not solve the problem.

NEW QUESTION 75

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

Which solution will accomplish this?

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

Answer: D

Explanation:

Use the AWS::CloudFormation::Init type to include metadata on an Amazon EC2 instance for the cfn-init helper script. If your template calls the cfn-init script, the script looks for resource metadata rooted in the AWS::CloudFormation::Init metadata key. Reference:

<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-resource-init.html>

NEW QUESTION 77

An e-commerce 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 an 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 grou
- 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 grou
- 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 82

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

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

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

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

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

Answer: A

Explanation:

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

NEW QUESTION 85

A company is performing vulnerability scanning for all Amazon EC2 instances across many accounts. The accounts are in an organization in AWS Organizations. Each account's VPCs are attached to a shared transit gateway. The VPCs send traffic to the internet through a central egress VPC. The company has enabled Amazon Inspector in a delegated administrator account and has enabled scanning for all member accounts.

A DevOps engineer discovers that some EC2 instances are listed in the "not scanning" tab in Amazon Inspector.

Which combination of actions should the DevOps engineer take to resolve this issue? (Choose three.)

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

Answer: ABE

Explanation:

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

NEW QUESTION 89

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 logs 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 94

A DevOps engineer is building a continuous deployment pipeline for a serverless application that uses AWS Lambda functions. The company wants to reduce the customer impact of an unsuccessful deployment. The company also wants to monitor for issues.

Which deploy stage configuration will meet these requirements?

- A. Use an AWS Serverless Application Model (AWS SAM) template to define the serverless applicatio
- B. Use AWS CodeDeploy to deploy the Lambda functions with the Canary10Percent15Minutes Deployment Preference Typ
- C. Use Amazon CloudWatch alarms to monitor the health of the functions.
- D. Use AWS CloudFormation to publish a new stack update, and include Amazon CloudWatch alarms on all resource
- E. Set up an AWS CodePipeline approval action for a developer to verify and approve the AWS CloudFormation change set.
- F. Use AWS CloudFormation to publish a new version on every stack update, and include Amazon CloudWatch alarms on all resource
- G. Use the RoutingConfig property of the AWS::Lambda::Alias resource to update the traffic routing during the stack update.
- H. Use AWS CodeBuild to add sample event payloads for testing to the Lambda function
- I. Publish a new version of the functions, and include Amazon CloudWatch alarm
- J. Update the production alias to point to the new versio
- K. Configure rollbacks to occur when an alarm is in the ALARM state.

Answer: D

Explanation:

Use routing configuration on an alias to send a portion of traffic to a second function version. For example, you can reduce the risk of deploying a new version by configuring the alias to send most of the traffic to the existing version, and only a small percentage of traffic to the new version.

<https://docs.aws.amazon.com/lambda/latest/dg/configuration-aliases.html>

The following are the steps involved in the deploy stage configuration that will meet the requirements:

? Use AWS CodeBuild to add sample event payloads for testing to the Lambda functions.

? Publish a new version of the functions, and include Amazon CloudWatch alarms.

? Update the production alias to point to the new version.

? Configure rollbacks to occur when an alarm is in the ALARM state.

This configuration will help to reduce the customer impact of an unsuccessful deployment

by deploying the new version of the functions to a staging environment first. This will allow the DevOps engineer to test the new version of the functions before deploying it to production.

The configuration will also help to monitor for issues by including Amazon CloudWatch alarms. These alarms will alert the DevOps engineer if there are any problems with the new version of the functions.

NEW QUESTION 95

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

Which solution will accomplish this?

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

Answer: C

Explanation:

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

? Create an Amazon CloudWatch Events rule to execute an AWS Lambda function

daily. CloudWatch Events is a service that enables event-driven architectures by delivering events from various sources to targets. Lambda is a service that lets you

run code without provisioning or managing servers. By creating a CloudWatch Events rule that executes a Lambda function daily, the DevOps engineer can schedule a recurring task to check and delete unattached EBS volumes.

? The Lambda function should find unattached EBS volumes and tag them with the

current date, and delete unattached volumes that have tags with dates that are more than 14 days old. The Lambda function can use the EC2 API to list and filter unattached EBS volumes based on their state and tags. The function can then tag each unattached volume with the current date using the create-tags command.

The function can also compare the tag value with the current date and delete any unattached volume that has been tagged more than 14 days ago using the

delete- volume command.

NEW QUESTION 99

To run an application, a DevOps engineer launches an Amazon EC2 instance with public IP addresses in a public subnet. A user data script obtains the application artifacts and installs them on the instances upon launch. A change to the security classification of the application now requires the instances to run with no access to the internet. While the instances launch successfully and show as healthy, the application does not seem to be installed.

Which of the following should successfully install the application while complying with the new rule?

- A. Launch the instances in a public subnet with Elastic IP addresses attached
- B. Once the application is installed and running, run a script to disassociate the Elastic IP addresses afterwards.
- C. Set up a NAT gateway
- D. Deploy the EC2 instances to a private subnet
- E. Update the private subnet's route table to use the NAT gateway as the default route.
- F. Publish the application artifacts to an Amazon S3 bucket and create a VPC endpoint for S3. Assign an IAM instance profile to the EC2 instances so they can read the application artifacts from the S3 bucket.
- G. Create a security group for the application instances and allow only outbound traffic to the artifact repository
- H. Remove the security group rule once the install is complete.

Answer: C

Explanation:

EC2 instances running in private subnets of a VPC can now have controlled access to S3 buckets, objects, and API functions that are in the same region as the VPC. You can use an S3 bucket policy to indicate which VPCs and which VPC Endpoints have access to your S3 buckets 1-

<https://aws.amazon.com/pt/blogs/aws/new-vpc-endpoint-for-amazon-s3/>

NEW QUESTION 100

A company hosts applications in its AWS account. Each application logs to an individual Amazon CloudWatch log group. The company's CloudWatch costs for ingestion are increasing.

A DevOps engineer needs to identify which applications are the source of the increased logging costs.

Which solution will meet these requirements?

- A. Use CloudWatch metrics to create a custom expression that identifies the CloudWatch log groups that have the most data being written to them.
- B. Use CloudWatch Logs Insights to create a set of queries for the application log groups to identify the number of logs written for a period of time.
- C. Use AWS Cost Explorer to generate a cost report that details the cost for CloudWatch usage.
- D. Use AWS CloudTrail to filter for CreateLogStream events for each application.

Answer: C

Explanation:

The correct answer is C.

A comprehensive and detailed explanation is:

? Option A is incorrect because using CloudWatch metrics to create a custom expression that identifies the CloudWatch log groups that have the most data being written to them is not a valid solution. CloudWatch metrics do not provide information about the size or volume of data being ingested by CloudWatch logs.

CloudWatch metrics only provide information about the number of events, bytes, and errors that occur within a log group or stream. Moreover, creating a custom expression with CloudWatch metrics would require using the search_web tool, which is not necessary for this use case.

? Option B is incorrect because using CloudWatch Logs Insights to create a set of queries for the application log groups to identify the number of logs written for a period of time is not a valid solution. CloudWatch Logs Insights can help analyze and filter log events based on patterns and expressions, but it does not provide information about the cost or billing of CloudWatch logs. CloudWatch Logs Insights also charges based on the amount of data scanned by each query, which could increase the logging costs further.

? Option C is correct because using AWS Cost Explorer to generate a cost report that details the cost for CloudWatch usage is a valid solution. AWS Cost Explorer is a tool that helps visualize, understand, and manage AWS costs and usage over time. AWS Cost Explorer can generate custom reports that show the breakdown of costs by service, region, account, tag, or any other dimension. AWS Cost Explorer can also filter and group costs by usage type, which can help identify the specific CloudWatch log groups that are the source of the increased logging costs.

? Option D is incorrect because using AWS CloudTrail to filter for CreateLogStream events for each application is not a valid solution. AWS CloudTrail is a service that records API calls and account activity for AWS services, including CloudWatch logs. However, AWS CloudTrail does not provide information about the cost or billing of CloudWatch logs. Filtering for CreateLogStream events would only show when a new log stream was created within a log group, but not how much data was ingested or stored by that log stream.

References:

? CloudWatch Metrics

? CloudWatch Logs Insights

? AWS Cost Explorer

? AWS CloudTrail

NEW QUESTION 103

A company deploys updates to its Amazon API Gateway API several times a week by using an AWS CodePipeline pipeline. As part of the update process, the company exports the JavaScript SDK for the API from the API Gateway console and uploads the SDK to an Amazon S3 bucket.

The company has configured an Amazon CloudFront distribution that uses the S3 bucket as an origin. Web clients then download the SDK by using the CloudFront distribution's endpoint. A DevOps engineer needs to implement a solution to make the new SDK available automatically during new API deployments.

Which solution will meet these requirements?

- A. Create a CodePipeline action immediately after the deployment stage of the API.
- B. Configure the action to invoke an AWS Lambda function.
- C. Configure the Lambda function to download the SDK from API Gateway, upload the SDK to the S3 bucket, and create a CloudFront invalidation for the SDK path.
- D. Create a CodePipeline action immediately after the deployment stage of the API. Configure the action to use the CodePipeline integration with API Gateway to export the SDK to Amazon S3. Create another action that uses the CodePipeline integration with Amazon S3 to invalidate the cache for the SDK path.
- E. Gateway to export the SDK to Amazon S3. Create another action that uses the CodePipeline integration with Amazon S3 to invalidate the cache for the SDK path.
- F. Create an Amazon EventBridge rule that reacts to UpdateStage events from AWS API Gateway. Configure the rule to invoke an AWS Lambda function to download the SDK from API Gateway, upload the SDK to the S3 bucket, and call the CloudFront API to create an invalidation for the SDK path.
- G. Create an Amazon EventBridge rule that reacts to CreateStage events from AWS API Gateway. Configure the rule to invoke an AWS Lambda function to download the SDK from API Gateway, upload the SDK to the S3 bucket, and call the CloudFront API to create an invalidation for the SDK path.

- H. Deployment events from aws apigatewa
- I. Configure the rule to invoke an AWS Lambda function to download the SDK from AP
- J. Gateway upload the SDK to the S3 bucket and call the S3 API to invalidate the cache for the SDK path.

Answer: A

Explanation:

This solution would allow the company to automate the process of updating the SDK and making it available to web clients. By adding a CodePipeline action immediately after the deployment stage of the API, the Lambda function will be invoked automatically each time the API is updated. The Lambda function should be able to download the new SDK from API Gateway, upload it to the S3 bucket and also create a CloudFront invalidation for the SDK path so that the latest version of the SDK is available for the web clients. This is the most straight forward solution and it will meet the requirements.

NEW QUESTION 106

A security review has identified that an AWS CodeBuild project is downloading a database population script from an Amazon S3 bucket using an unauthenticated request. The security team does not allow unauthenticated requests to S3 buckets for this project. How can this issue be corrected in the MOST secure manner?

- A. Add the bucket name to the AllowedBuckets section of the CodeBuild project setting
- B. Update the build spec to use the AWS CLI to download the database population script.
- C. Modify the S3 bucket settings to enable HTTPS basic authentication and specify a token
- D. Update the build spec to use cURL to pass the token and download the database population script.
- E. Remove unauthenticated access from the S3 bucket with a bucket policy
- F. Modify the service role for the CodeBuild project to include Amazon S3 access
- G. Use the AWS CLI to download the database population script.
- H. Remove unauthenticated access from the S3 bucket with a bucket policy
- I. Use the AWS CLI to download the database population script using an IAM access key and a secret access key.

Answer: C

Explanation:

A bucket policy is a resource-based policy that defines who can access a specific S3 bucket and what actions they can perform on it. By removing unauthenticated access from the bucket policy, you can prevent anyone without valid credentials from accessing the bucket. A service role is an IAM role that allows an AWS service, such as CodeBuild, to perform actions on your behalf. By modifying the service role for the CodeBuild project to include Amazon S3 access, you can grant the project permission to read and write objects in the S3 bucket. The AWS CLI is a command-line tool that allows you to interact with AWS services, such as S3, using commands in your terminal. By using the AWS CLI to download the database population script, you can leverage the service role credentials and encryption to secure the data transfer.

For more information, you can refer to these web pages:

? [Using bucket policies and user policies - Amazon Simple Storage Service]

? [Create a service role for CodeBuild - AWS CodeBuild]

? [AWS Command Line Interface]

NEW QUESTION 111

A DevOps engineer needs to configure a blue green deployment for an existing three-tier application. The application runs on Amazon EC2 instances and uses an Amazon RDS database. The EC2 instances run behind an Application Load Balancer (ALB) and are in an Auto Scaling group.

The DevOps engineer has created a launch template and an Auto Scaling group for the blue environment. The DevOps engineer also has created a launch template and an Auto Scaling group for the green environment. Each Auto Scaling group deploys to a matching blue or green target group. The target group also specifies which software blue or green gets loaded on the EC2 instances. The ALB can be configured to send traffic to the blue environment's target group or the green environment's target group. An Amazon Route 53 record for www.example.com points to the ALB.

The deployment must move traffic all at once between the software on the blue environment's EC2 instances to the newly deployed software on the green environment's EC2 instances.

What should the DevOps engineer do to meet these requirements?

- A. Start a rolling restart to the Auto Scaling group for the green environment to deploy the new software on the green environment's EC2 instances. When the rolling restart is complete, use an AWS CLI command to update the ALB to send traffic to the green environment's target group.
- B. Use an AWS CLI command to update the ALB to send traffic to the green environment's target group.
- C. Then start a rolling restart of the Auto Scaling group for the green environment to deploy the new software on the green environment's EC2 instances.
- D. Update the launch template to deploy the green environment's software on the blue environment's EC2 instances. Keep the target groups and Auto Scaling groups unchanged in both environments. Perform a rolling restart of the blue environment's EC2 instances.
- E. Start a rolling restart of the Auto Scaling group for the green environment to deploy the new software on the green environment's EC2 instances. When the rolling restart is complete, update the Route 53 DNS to point to the green environment's endpoint on the ALB.

Answer: A

Explanation:

This solution will meet the requirements because it will use a rolling restart to gradually replace the EC2 instances in the green environment with new instances that have the new software version installed. A rolling restart is a process that terminates and launches instances in batches, ensuring that there is always a minimum number of healthy instances in service. This way, the green environment can be updated without affecting the availability or performance of the application. When the rolling restart is complete, the DevOps engineer can use an AWS CLI command to modify the listener rules of the ALB and change the default action to forward traffic to the green environment's target group. This will switch the traffic from the blue environment to the green environment all at once, as required by the question.

NEW QUESTION 115

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 delete
- 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 117

A company has 20 service teams. Each service team is responsible for its own microservice. Each service team uses a separate AWS account for its microservice and a VPC with the 192.168.0.0/22 CIDR block. The company manages the AWS accounts with AWS Organizations.

Each service team hosts its microservice on multiple Amazon EC2 instances behind an Application Load Balancer. The microservices communicate with each other across the public internet. The company's security team has issued a new guideline that all communication between microservices must use HTTPS over private network connections and cannot traverse the public internet.

A DevOps engineer must implement a solution that fulfills these obligations and minimizes the number of changes for each service team.

Which solution will meet these requirements?

- A. Create a new AWS account in AWS Organizations. Create a VPC in this account and use AWS Resource Access Manager to share the private subnets of this VPC with the organization. Instruct the service teams to launch a new
- B. Network Load Balancer (NLB) and EC2 instances that use the shared private subnets. Use the NLB DNS names for communication between microservices.
- C. Create a Network Load Balancer (NLB) in each of the microservice VPCs. Use AWS PrivateLink to create VPC endpoints in each AWS account for the NLBs. Create subscriptions to each VPC endpoint in each of the other AWS accounts. Use the VPC endpoint DNS names for communication between microservices.
- D. Create a Network Load Balancer (NLB) in each of the microservice VPCs. Create VPC peering connections between each of the microservice VPCs. Update the route tables for each VPC to use the peering links. Use the NLB DNS names for communication between microservices.
- E. Create a new AWS account in AWS Organizations. Create a transit gateway in this account and use AWS Resource Access Manager to share the transit gateway with the organization.
- F. In each of the microservice VPCs
- G. create a transit gateway attachment to the shared transit gateway. Update the route tables of each VPC to use the transit gateway. Create a Network Load Balancer (NLB) in each of the microservice VPCs. Use the NLB DNS names for communication between microservices.

Answer: B

Explanation:

<https://aws.amazon.com/blogs/networking-and-content-delivery/connecting-networks-with-overlapping-ip-ranges/> Private link is the best option because Transit Gateway doesn't support overlapping CIDR ranges.

NEW QUESTION 121

A company's DevOps engineer is creating an AWS Lambda function to process notifications from an Amazon Simple Notification Service (Amazon SNS) topic. The Lambda function will process the notification messages and will write the contents of the notification messages to an Amazon RDS Multi-AZ DB instance.

During testing, a database administrator accidentally shut down the DB instance. While the database was down, the company lost several of the SNS notification messages that were delivered during that time.

The DevOps engineer needs to prevent the loss of notification messages in the future. Which solutions will meet this requirement? (Select TWO.)

- A. Replace the RDS Multi-AZ DB instance with an Amazon DynamoDB table.
- B. Configure an Amazon Simple Queue Service (Amazon SQS) queue as a destination of the Lambda function.
- C. Configure an Amazon Simple Queue Service (Amazon SQS) dead-letter queue for the SNS topic.
- D. Subscribe an Amazon Simple Queue Service (Amazon SQS) queue to the SNS topic. Configure the Lambda function to process messages from the SQS queue.
- E. Replace the SNS topic with an Amazon EventBridge event bus. Configure an EventBridge rule on the new event bus to invoke the Lambda function for each event.

Answer: CD

Explanation:

These solutions will meet the requirement because they will prevent the loss of notification messages in the future. An Amazon SQS queue is a service that provides a reliable, scalable, and secure message queue for asynchronous communication between distributed components. You can use an SQS queue to buffer messages from an SNS topic and ensure that they are delivered and processed by a Lambda function, even if the function or the database is temporarily unavailable.

Option C will configure an SQS dead-letter queue for the SNS topic. A dead-letter queue is a queue that receives messages that could not be delivered to any subscriber after a specified number of retries. You can use a dead-letter queue to store and analyze failed messages, or to reprocess them later. This way, you can avoid losing messages that could not be delivered to the Lambda function due to network errors, throttling, or other issues. Option D will subscribe an SQS queue to the SNS topic and configure the Lambda function to process messages from the SQS queue. This will decouple the SNS topic from the Lambda function and provide more flexibility and control over the message delivery and processing. You can use an SQS queue to store messages from the SNS topic until they are ready to be processed by the Lambda function, and also to retry processing in case of failures. This way, you can avoid losing messages that could not be processed by the Lambda function due to database errors, timeouts, or other issues.

NEW QUESTION 126

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 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 meet 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 131

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 132

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 135

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 Configure API 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 140

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