

Exam Questions DOP-C02

AWS Certified DevOps Engineer - Professional

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NEW QUESTION 1

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

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

Answer: A

Explanation:

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

NEW QUESTION 2

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

- A.

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

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

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

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

Answer: C

Explanation:

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

NEW QUESTION 3

A company 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 AP
- B. Configure the action to invoke an AWS Lambda functio
- 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 AP
- 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 apigateway 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 Creat
- H. Deployment events from aws apigateway.Configure the rule to invoke an AWS Lambda function to download the SDK from AP
- I. 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 4

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

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

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

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

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

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

Answer: AD

Explanation:

"AWS CodeArtifact operates in multiple Availability Zones and stores artifact data and metadata in Amazon S3 and Amazon DynamoDB. Your encrypted data is redundantly stored across multiple facilities and multiple devices in each facility, making it highly available and highly durable."
<https://aws.amazon.com/codeartifact/features/> With no internet connectivity, a gateway endpoint becomes necessary to access S3.

NEW QUESTION 5

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 applicatio
- 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 applicatio
- 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 event
- 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 pullrequest when the test results are complete.

Answer: B

Explanation:

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

NEW QUESTION 6

A large enterprise is deploying a web application on AWS. The application runs on Amazon EC2 instances behind an Application Load Balancer. The instances run in an Auto Scaling group across multiple Availability Zones. The application stores data in an Amazon RDS for Oracle DB instance and Amazon DynamoDB. There are separate environments for development testing and production. What is the MOST secure and flexible way to obtain password credentials during deployment?

- A. Retrieve an access key from an AWS Systems Manager securestring parameter to access AWS services.Retrieve the database credentials from a Systems Manager SecureString parameter.
- B. Launch the EC2 instances with an EC2 1AM role to access AWS services Retrieve the database credentials from AWS Secrets Manager.
- C. Retrieve an access key from an AWS Systems Manager plaintext parameter to access AWS services.Retrieve the database credentials from a Systems Manager SecureString parameter.
- D. Launch the EC2 instances with an EC2 1AM role to access AWS services Store the database passwords in an encrypted config file with the application artifacts.

Answer: B

Explanation:

AWS Secrets Manager is a secrets management service that helps you protect access to your applications, services, and IT resources. This service enables you to easily rotate, manage, and retrieve database credentials, API keys, and other secrets throughout their lifecycle. Using Secrets Manager, you can secure and manage secrets used to access resources in the AWS Cloud, on third-party services, and on-premises. SSM parameter store and AWS Secret manager are both a secure option. However, Secrets manager is more flexible and has more options like password generation. Reference: <https://www.1strategy.com/blog/2019/02/28/aws-parameter-store-vs-aws-secrets-manager/>

NEW QUESTION 7

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

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

Answer: B

Explanation:

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

NEW QUESTION 8

A video-sharing company stores its videos in Amazon S3. The company has observed a sudden increase in video access requests, but the company does not know which videos are most popular. The company needs to identify the general access pattern for the video files. This pattern includes the number of users who access a certain file on a given day, as well as the numb A DevOps engineer manages a large commercial website that runs on Amazon EC2 The website uses Amazon Kinesis Data Streams to collect and process web togs The DevOps engineer manages the Kinesis consumer application, which also runs on Amazon EC2 Sudden increases of data cause the Kinesis consumer application to (all behind and the Kinesis data streams drop records before the records can be processed The DevOps engineer must implement a solution to improve stream handling Which solution meets these requirements with the MOST operational efficiency" er of pull requests for certain files. How can the company meet these requirements with the LEAST amount of effort?

- A. Activate S3 server access loggin
- B. Import the access logs into an Amazon Aurora databas
- C. Use an Aurora SQL query to analyze the access patterns.
- D. Activate S3 server access loggin
- E. Use Amazon Athena to create an external table with the log file
- F. Use Athena to create a SQL query to analyze the access patterns.

- G. Invoke an AWS Lambda function for every S3 object access even
- H. Configure the Lambda function to write the file access information, such as use
- I. S3 bucket, and file key, to an Amazon Aurora databas
- J. Use an Aurora SQL query to analyze the access patterns.
- K. Record an Amazon CloudWatch Logs log message for every S3 object access even
- L. Configure a CloudWatch Logs log stream to write the file access information, such as user, S3 bucket, and file key, to an Amazon Kinesis Data Analytics for SQL applicatio
- M. Perform a sliding window analysis.

Answer: B

Explanation:

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

NEW QUESTION 9

A company must encrypt all AMIs that the company shares across accounts. A DevOps engineer has access to a source account where an unencrypted custom AMI has been built. The DevOps engineer also has access to a target account where an Amazon EC2 Auto Scaling group will launch EC2 instances from the AMI. The DevOps engineer must share the AMI with the target account.

The company has created an AWS Key Management Service (AWS KMS) key in the source account. Which additional steps should the DevOps engineer perform to meet the requirements? (Choose three.)

- A. In the source account, copy the unencrypted AMI to an encrypted AM
- B. Specify the KMS key in the copy action.
- C. In the source account, copy the unencrypted AMI to an encrypted AM
- D. Specify the default Amazon Elastic Block Store (Amazon EBS) encryption key in the copy action.
- E. In the source account, create a KMS grant that delegates permissions to the Auto Scaling group service-linked role in the target account.
- F. In the source account, modify the key policy to give the target account permissions to create a gran
- G. In the target account, create a KMS grant that delegates permissions to the Auto Scaling groupservice-linked role.
- H. In the source account, share the unencrypted AMI with the target account.
- I. In the source account, share the encrypted AMI with the target account.

Answer: ADF

Explanation:

The Auto Scaling group service-linked role must have a specific grant in the source account in order to decrypt the encrypted AMI. This is because the service-linked role does not have permissions to assume the default IAM role in the source account.

The following steps are required to meet the requirements:

- In the source account, copy the unencrypted AMI to an encrypted AMI. Specify the KMS key in the copy action.
- In the source account, create a KMS grant that delegates permissions to the Auto Scaling group service-linked role in the target account.
- In the source account, share the encrypted AMI with the target account.
- In the target account, attach the KMS grant to the Auto Scaling group service-linked role.

The first three steps are the same as the steps that I described earlier. The fourth step is required to grant the Auto Scaling group service-linked role permissions to decrypt the AMI in the target account.

NEW QUESTION 10

A company's DevOps engineer is working in a multi-account environment. The company uses AWS Transit Gateway to route all outbound traffic through a network operations account. In the network operations account all account traffic passes through a firewall appliance for inspection before the traffic goes to an internet gateway.

The firewall appliance sends logs to Amazon CloudWatch Logs and includes event seventies of CRITICAL, HIGH, MEDIUM, LOW, and INFO. The security team wants to receive an alert if any CRITICAL events occur.

What should the DevOps engineer do to meet these requirements?

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

Answer: B

Explanation:

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

NEW QUESTION 10

A company has an organization in AWS Organizations. The organization includes workload accounts that contain enterprise applications. The company centrally manages users from an operations account. No users can be created in the workload accounts. The company recently added an operations team and must provide the operations team members with administrator access to each workload account.

Which combination of actions will provide this access? (Choose three.)

- A. Create a SysAdmin role in the operations accoun

- B. Attach the AdministratorAccess policy to the role. Modify the trust relationship to allow the sts:AssumeRole action from the workload accounts.
- C. Create a SysAdmin role in each workload account
- D. Attach the AdministratorAccess policy to the role. Modify the trust relationship to allow the sts:AssumeRole action from the operations account.
- E. Create an Amazon Cognito identity pool in the operations account
- F. Attach the SysAdmin role as an authenticated role.
- G. In the operations account, create an IAM user for each operations team member.
- H. In the operations account, create an IAM user group that is named SysAdmin
- I. Add an IAM policy that allows the sts:AssumeRole action for the SysAdmin role in each workload account
- J. Add all operations team members to the group.
- K. Create an Amazon Cognito user pool in the operations account
- L. Create an Amazon Cognito user for each operations team member.

Answer: BDE

Explanation:

https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial_cross-account-with-roles.html

NEW QUESTION 14

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

- A. Create an AWS CloudFormation template that defines an AWS Inspector rule to check whether EBS encryption is enable
- B. Save the template to an Amazon S3 bucket that has been shared with all accounts within the compan
- C. Update the account creation script pointing to the CloudFormation template in Amazon S3.
- D. Create an AWS Config organizational rule to check whether EBS encryption is enabled and deploy the rule using the AWS CL
- E. Create and apply an SCP to prohibit stopping and deleting AWS Config across the organization.
- F. Create an SCP in Organization
- G. Set the policy to prevent the launch of Amazon EC2 instances without encryption on the EBS volumes using a conditional expressio
- H. Apply the SCP to all AWS accounts. Use Amazon Athena to analyze the AWS CloudTrail output, looking for events that deny an ec2:RunInstances action.
- I. Deploy an IAM role to all accounts from a single trusted account
- J. 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
- K. 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 19

A company uses a series of individual Amazon Cloud Formation templates to deploy its multi-Region Applications. These templates must be deployed in a specific order. The company is making more changes to the templates than previously expected and wants to deploy new templates more efficiently. Additionally, the data engineering team must be notified of all changes to the templates. What should the company do to accomplish these goals?

- A. Create an AWS Lambda function to deploy the Cloud Formation templates in the required order Use stack policies to alert the data engineering team.
- B. Host the Cloud Formation templates in Amazon S3 Use Amazon S3 events to directly trigger CloudFormation updates and Amazon SNS notifications.
- C. Implement CloudFormation StackSets and use drift detection to trigger update alerts to the data engineering team.
- D. Leverage CloudFormation nested stacks and stack sets (or deployments Use Amazon SNS to notify the data engineering team.

Answer: D

Explanation:

This solution will meet the requirements because it will use CloudFormation nested stacks and stack sets to deploy the templates more efficiently and consistently across multiple regions. Nested stacks allow the company to separate out common components and reuse templates, while stack sets allow the company to create stacks in multiple accounts and regions with a single template. The company can also use Amazon SNS to send notifications to the data engineering team whenever a change is made to the templates or the stacks. Amazon SNS is a service that allows you to publish messages to subscribers, such as email addresses, phone numbers, or other AWS services. By using Amazon SNS, the company can ensure that the data engineering team is aware of all changes to the templates and can take appropriate actions if needed. What is Amazon SNS? - Amazon Simple Notification Service

NEW QUESTION 23

A company has a data ingestion application that runs across multiple AWS accounts. The accounts are in an organization in AWS Organizations. The company needs to monitor the application and consolidate access to the application. Currently the company is running the application on Amazon EC2 instances from several Auto Scaling groups. The EC2 instances have no access to the internet because the data is sensitive Engineers have deployed the necessary VPC endpoints. The EC2 instances run a custom AMI that is built specifically for the application. To maintain and troubleshoot the application, system administrators need the ability to log in to the EC2 instances. This access must be automated and controlled centrally. The company's security team must receive a notification whenever the instances are accessed. Which solution will meet these requirements?

- A. Create an Amazon EventBridge rule to send notifications to the security team whenever a user logs in to an EC2 instance Use EC2 Instance Connect to log in to the instance
- B. Deploy Auto Scaling groups by using AWS Cloud Formation Use the cfn-init helper script to deploy appropriate VPC routes for external access Rebuild the custom AMI so that the custom AMI includes AWS Systems Manager Agent.
- C. Deploy a NAT gateway and a bastion host that has internet access Create a security group that allows incoming traffic on all the EC2 instances from the bastion host Install AWS Systems Manager Agent on all the EC2 instances Use Auto Scaling group lifecycle hooks for monitoring and auditing access Use Systems Manager Session Manager to log in to the instances Send logs to a log group in Amazon CloudWatch Log
- D. Export data to Amazon S3 for auditing Send notifications to the security team by using S3 event notifications.
- E. Use EC2 Image Builder to rebuild the custom AMI Include the most recent version of AWS Systems Manager Agent in the Image Configure the Auto Scaling group to attach the AmazonSSMManagedInstanceCore role to all the EC2 instances Use Systems Manager Session Manager to log in to the instances Enable logging of session details to Amazon S3 Create an S3 event notification for new file uploads to send a message to the security team through an Amazon Simple

Notification Service (Amazon SNS) topic.

F. Use AWS Systems Manager Automation to build Systems Manager Agent into the custom AMI Configure AWS Configure to attach an SCP to the root organization account to allow the EC2 instances to connect to Systems Manager Use Systems Manager Session Manager to log in to the instances Enable logging of session details to Amazon S3 Create an S3 event notification for new file uploads to send a message to the security team through an Amazon Simple Notification Service (Amazon SNS) topic.

Answer: C

Explanation:

Even if AmazonSSMManagedInstanceCore is a managed policy and not an IAM role I will go with C because this policy is to be attached to an IAM role for EC2 to access System Manager.

NEW QUESTION 26

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 27

A company requires its developers to tag all Amazon Elastic Block Store (Amazon EBS) volumes in an account to indicate a desired backup frequency. This requirement Includes EBS volumes that do not require backups. The company uses custom tags named Backup_Frequency that have values of none, daily, or weekly that correspond to the desired backup frequency. An audit finds that developers are occasionally not tagging the EBS volumes.

A DevOps engineer needs to ensure that all EBS volumes always have the Backup_Frequency tag so that the company can perform backups at least weekly unless a different value is specified.

Which solution will meet these requirements?

- A. Set up AWS Config in the account
- B. Create a custom rule that returns a compliance failure for all Amazon EC2 resources that do not have a Backup Frequency tag applied
- C. Configure a remediation action that uses a custom AWS Systems Manager Automation runbook to apply the Backup_Frequency tag with a value of weekly.
- D. Set up AWS Config in the account
- E. Use a managed rule that returns a compliance failure for EC2::Volume resources that do not have a Backup Frequency tag applied
- F. Configure a remediation action that uses a custom AWS Systems Manager Automation runbook to apply the Backup_Frequency tag with a value of weekly.
- G. Turn on AWS CloudTrail in the account
- H. Create an Amazon EventBridge rule that reacts to EBS CreateVolume event
- I. Configure a custom AWS Systems Manager Automation runbook to apply the Backup_Frequency tag with a value of weekly
- J. Specify the runbook as the target of the rule.
- K. Turn on AWS CloudTrail in the account
- L. Create an Amazon EventBridge rule that reacts to EBS CreateVolume events or EBS ModifyVolume event
- M. Configure a custom AWS Systems Manager Automation runbook to apply the Backup_Frequency tag with a value of weekly
- N. Specify the runbook as the target of the rule.

Answer: B

Explanation:

The following are the steps that the DevOps engineer should take to ensure that all EBS volumes always have the Backup_Frequency tag so that the company can perform backups at least weekly unless a different value is specified:

- Set up AWS Config in the account.
- Use a managed rule that returns a compliance failure for EC2::Volume resources that do not have a Backup Frequency tag applied.
- Configure a remediation action that uses a custom AWS Systems Manager Automation runbook to apply the Backup_Frequency tag with a value of weekly.

The managed rule AWS::Config::EBSVolumesWithoutBackupTag will return a compliance failure for any EBS volume that does not have the Backup_Frequency tag applied. The remediation action will then use the Systems Manager Automation runbook to apply the Backup_Frequency tag with a value of weekly to the EBS volume.

NEW QUESTION 29

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

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

Answer: D

Explanation:

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

- Configure CodeBuild to encrypt the build artifacts using AWS Secrets Manager.
- Deploy the containerized quality control applications to CodeBuild.

This approach is the most maintainable because it eliminates the need to manage Jenkins on EC2 instances. CodeBuild is a managed service, so the DevOps engineer does not need to worry about patching or upgrading the service.

<https://docs.aws.amazon.com/codebuild/latest/userguide/security-encryption.html> Build artifact encryption - CodeBuild requires access to an AWS KMS CMK in order to encrypt its build output artifacts. By default, CodeBuild uses an AWS Key Management Service CMK for Amazon S3 in your AWS account. If you do not want to use this CMK, you must create and configure a customer-managed CMK. For more information Creating keys.

NEW QUESTION 30

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 deploystop-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 35

A company has chosen AWS to host a new application. The company needs to implement a multi-account strategy. A DevOps engineer creates a new AWS account and an organization in AWS Organizations. The DevOps engineer also creates the OU structure for the organization and sets up a landing zone by using AWS Control Tower.

The DevOps engineer must implement a solution that automatically deploys resources for new accounts that users create through AWS Control Tower Account Factory. When a user creates a new account, the solution must apply AWS CloudFormation templates and SCPs that are customized for the OU or the account to automatically deploy all the resources that are attached to the account. All the OUs are enrolled in AWS Control Tower.

Which solution will meet these requirements in the MOST automated way?

- A. Use AWS Service Catalog with AWS Control Towe
- B. Create portfolios and products in AWS ServiceCatalo
- C. Grant granular permissions to provision these resource
- D. Deploy SCPs by using the AWS CLI and JSON documents.
- E. Deploy CloudFormation stack sets by using the required template
- F. Enable automatic deployment.Deploy stack instances to the required account
- G. Deploy a CloudFormation stack set to the organization's management account to deploy SCPs.
- H. Create an Amazon EventBridge rule to detect the CreateManagedAccount even
- I. Configure AWS Service Catalog as the target to deploy resources to any new account
- J. Deploy SCPs by using the AWS CLI and JSON documents.
- K. Deploy the Customizations for AWS Control Tower (CfCT) solutio
- L. Use an AWS CodeCommit repository as the sourc
- M. In the repository, create a custom package that includes the CloudFormation templates and the SCP JSON documents.

Answer: D

Explanation:

The CfCT solution is designed for the exact purpose stated in the question. It extends the capabilities of AWS Control Tower by providing you with a way to automate resource provisioning and apply custom configurations across all AWS accounts created in the Control Tower environment. This enables the company to implement additional account customizations when new accounts are provisioned via the Control Tower Account Factory. The CloudFormation templates and SCPs can be added to a CodeCommit repository and will be automatically deployed to new accounts when they are created. This provides a highly automated solution that does not require manual intervention to deploy resources and SCPs to new accounts.

NEW QUESTION 40

A company's DevOps engineer uses AWS Systems Manager to perform maintenance tasks during maintenance windows. The company has a few Amazon EC2 instances that require a restart after notifications from AWS Health. The DevOps engineer needs to implement an automated solution to remediate these notifications. The DevOps engineer creates an Amazon EventBridge rule.

How should the DevOps engineer configure the EventBridge rule to meet these requirements?

- A. Configure an event source of AWS Health, a service of EC2. and an event type that indicates instance maintenanc
- B. Target a Systems Manager document to restart the EC2 instance.
- C. Configure an event source of Systems Manager and an event type that indicates a maintenance window.Target a Systems Manager document to restart the EC2 instance.
- D. Configure an event source of AWS Health, a service of EC2, and an event type that indicates instance maintenanc

- E. Target a newly created AWS Lambda function that registers an automation task to restart the EC2 instance during a maintenance window.
- F. Configure an event source of EC2 and an event type that indicates instance maintenance.
- G. Target a newly created AWS Lambda function that registers an automation task to restart the EC2 instance during a maintenance window.

Answer: C

Explanation:

AWS Health provides real-time events and information related to your AWS infrastructure. It can be integrated with Amazon EventBridge to act upon the health events automatically. If the maintenance notification from AWS Health indicates that an EC2 instance requires a restart, you can set up an EventBridge rule to respond to such events. In this case, the target of this rule would be a Lambda function that would trigger a Systems Manager automation to restart the EC2 instance during a maintenance window. Remember, AWS Health is the source of the events (not EC2 or Systems Manager), and AWS Lambda can be used to execute complex remediation tasks, such as scheduling maintenance tasks via Systems Manager.

The following are the steps involved in configuring the EventBridge rule to meet these requirements:

- > Configure an event source of AWS Health, a service of EC2, and an event type that indicates instance maintenance.
- > Target a newly created AWS Lambda function that registers an automation task to restart the EC2 instance during a maintenance window.

The AWS Lambda function will be triggered by the event from AWS Health. The function will then register an automation task to restart the EC2 instance during the next maintenance window.

NEW QUESTION 41

A company recently created a new AWS Control Tower landing zone in a new organization in AWS Organizations. The landing zone must be able to demonstrate compliance with the Center for Internet Security (CIS) Benchmarks for AWS Foundations.

The company's security team wants to use AWS Security Hub to view compliance across all accounts. Only the security team can be allowed to view aggregated Security Hub Findings. In addition, specific users must be able to view findings from their own accounts within the organization. All accounts must be enrolled in Security Hub after the accounts are created.

Which combination of steps will meet these requirements in the MOST automated way? (Select THREE.)

- A. Turn on trusted access for Security Hub in the organization's management account.
- B. Create a new security account by using AWS Control Tower. Configure the new security account as the delegated administrator account for Security Hub.
- C. In the new security account, provide Security Hub with the CIS Benchmarks for AWS Foundations standards.
- D. Security Hub with the CIS Benchmarks for AWS Foundations standards.
- E. Turn on trusted access for Security Hub in the organization's management account.
- F. From the management account, provide Security Hub with the CIS Benchmarks for AWS Foundations standards.
- G. Create an AWS IAM identity Center (AWS Single Sign-On) permission set that includes the required permissions. Use the CreateAccountAssignment API operation to associate the security team users with the permission set and with the delegated security account.
- H. Create an SCP that explicitly denies any user who is not on the security team from accessing Security Hub.
- I. In Security Hub, turn on automatic enablement.
- J. In the organization's management account, create an Amazon EventBridge rule that reacts to the CreateManagedAccount event. Create an AWS Lambda function that uses the Security Hub CreateMembers API operation to add new accounts to Security Hub.
- K. Configure the EventBridge rule to invoke the Lambda function.

Answer: ACE

Explanation:

<https://docs.aws.amazon.com/securityhub/latest/userguide/accounts-orgs-auto-enable.html>

NEW QUESTION 42

A company manages multiple AWS accounts in AWS Organizations. The company's security policy states that AWS account root user credentials for member accounts must not be used. The company monitors access to the root user credentials.

A recent alert shows that the root user in a member account launched an Amazon EC2 instance. A DevOps engineer must create an SCP at the organization's root level that will prevent the root user in member accounts from making any AWS service API calls.

Which SCP will meet these requirements?

A)

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "*",
      "Resource": "*",
      "Condition": {
        "StringNotLike": { "aws:PrincipalArn": "arn:aws:iam::*:root" }
      }
    }
  ]
}
```

B)

```

    "Version": "2012-10-17",
    "Statement": [
      {
        "Effect": "Deny",
        "Action": "*",
        "Resource": "*",
        "Principal": { "AWS": "arn:aws:iam::*:root" }
      }
    ]
  }
}

```

C)

```

{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Deny",
      "Action": "*",
      "Resource": "*",
      "Condition": {
        "StringLike": { "aws:PrincipalArn": "arn:aws:iam::*:root" }
      }
    }
  ]
}

```

D)

```

{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "*",
      "Resource": "*",
      "Principal": "root"
    }
  ]
}

```

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

Answer: D

NEW QUESTION 46

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

What is the MOST cost-effective solution?

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

Answer: D

NEW QUESTION 49

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 polic

- 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 51

A company is implementing a well-architected design for its globally accessible API stack. The design needs to ensure both high reliability and fast response times for users located in North America and Europe.

The API stack contains the following three tiers: Amazon API Gateway

AWS Lambda Amazon DynamoDB

Which solution will meet the requirements?

- A. Configure Amazon Route 53 to point to API Gateway APIs in North America and Europe using health check
- B. Configure the APIs to forward requests to a Lambda function in that Region
- C. Configure the Lambda functions to retrieve and update the data in a DynamoDB table in the same Region as the Lambda function.
- D. Configure Amazon Route 53 to point to API Gateway APIs in North America and Europe using latency-based routing and health check
- E. Configure the APIs to forward requests to a Lambda function in that Region
- F. Configure the Lambda functions to retrieve and update the data in a DynamoDB global table.
- G. Configure Amazon Route 53 to point to API Gateway in North America, create a disaster recovery API in Europe, and configure both APIs to forward requests to the Lambda functions in that Region
- H. Retrieve the data from a DynamoDB global table
- I. Deploy a Lambda function to check the North America API health every 5 minutes
- J. In the event of a failure, update Route 53 to point to the disaster recovery API.
- K. Configure Amazon Route 53 to point to API Gateway API in North America using latency-based routing
- L. Configure the API to forward requests to the Lambda function in the Region nearest to the user
- M. Configure the Lambda function to retrieve and update the data in a DynamoDB table.

Answer: B

NEW QUESTION 52

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

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

When the CodeBuild project runs a build job, the job fails when the job tries to access the ECR repository. Which solution will resolve the issue of failed access to the ECR repository?

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

Answer: A

Explanation:

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

NEW QUESTION 54

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

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

- A. Filter the data through AWS X-Ray to visualize the data.
- B. Filter the data through Amazon QuickSight to visualize the data.
- C. Query the data with Amazon Athena.

- D. Query the data with Amazon Redshift.
- E. Use the AWS Glue Data Catalog as the persistent metadata store.
- F. Use Amazon DynamoDB as the persistent metadata store.

Answer: BCE

Explanation:

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

NEW QUESTION 57

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 application. Use AWS CodeDeploy to deploy the Lambda functions with the Canary10Percent15Minutes Deployment Preference Type.
- B. Use Amazon CloudWatch alarms to monitor the health of the functions.
- C. Use AWS CloudFormation to publish a new stack update, and include Amazon CloudWatch alarms on all resource.
- D. Set up an AWS CodePipeline approval action for a developer to verify and approve the AWS CloudFormation change set.
- E. Use AWS CloudFormation to publish a new version on every stack update, and include Amazon CloudWatch alarms on all resource.
- F. Use the RoutingConfig property of the AWS::Lambda::Alias resource to update the traffic routing during the stack update.
- G. Use AWS CodeBuild to add sample event payloads for testing to the Lambda function.
- H. Publish a new version of the functions, and include Amazon CloudWatch alarm.
- I. Update the production alias to point to the new version.
- J. 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 60

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

Which solution will meet these requirements in accordance with AWS best practices?

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

Answer: B

Explanation:

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

NEW QUESTION 63

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

Over time, the number of pull requests has increased. The pipeline is frequently blocked because of failing tests. To prevent this blockage, the development team

wants to run the unit and integration tests on each pull request before it is merged.
Which solution will meet these requirements?

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

Answer: B

Explanation:

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

NEW QUESTION 64

A business has an application that consists of five independent AWS Lambda functions.

The DevOps engineer has built a CI/CD pipeline using AWS CodePipeline and AWS CodeBuild that builds test packages and deploys each Lambda function in sequence. The pipeline uses an Amazon EventBridge rule to ensure the pipeline starts as quickly as possible after a change is made to the application source code.

After working with the pipeline for a few months the DevOps engineer has noticed the pipeline takes too long to complete.

What should the DevOps engineer implement to BEST improve the speed of the pipeline?

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

Answer: C

Explanation:

<https://docs.aws.amazon.com/codepipeline/latest/userguide/reference-pipeline-structure.html>

AWS doc: "To specify parallel actions, use the same integer for each action you want to run in parallel. For example, if you want three actions to run in sequence in a stage, you would give the first action the runOrder value of 1, the second action the runOrder value of 2, and the third the runOrder value of 3. However, if you want the second and third actions to run in parallel, you would give the first action the runOrder value of 1 and both the second and third actions the runOrder value of 2."

NEW QUESTION 67

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

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

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

Answer: C

Explanation:

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

NEW QUESTION 69

A company uses AWS Key Management Service (AWS KMS) keys and manual key rotation to meet regulatory compliance requirements. The security team wants to be notified when any keys have not been rotated after 90 days.

Which solution will accomplish this?

- A. Configure AWS KMS to publish to an Amazon Simple Notification Service (Amazon SNS) topic when keys are more than 90 days old.
- B. Configure an Amazon EventBridge event to launch an AWS Lambda function to call the AWS Trusted Advisor API and publish to an Amazon Simple Notification Service (Amazon SNS) topic.
- C. Develop an AWS Config custom rule that publishes to an Amazon Simple Notification Service (Amazon SNS) topic when keys are more than 90 days old.
- D. Configure AWS Security Hub to publish to an Amazon Simple Notification Service (Amazon SNS) topic when keys are more than 90 days old.

Answer: C

Explanation:

<https://aws.amazon.com/blogs/security/how-to-use-aws-config-to-determine-compliance-of-aws-kms-key-policies/>

NEW QUESTION 71

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

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

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

Answer: AC

Explanation:

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

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

NEW QUESTION 74

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