

# Amazon-Web-Services

## Exam Questions SAP-C02

AWS Certified Solutions Architect - Professional



### NEW QUESTION 1

- (Exam Topic 1)

A company is developing a new serverless API by using Amazon API Gateway and AWS Lambda. The company integrated the Lambda functions with API Gateway to use several shared libraries and custom classes.

A solutions architect needs to simplify the deployment of the solution and optimize for code reuse. Which solution will meet these requirements?

- A. Deploy the shared libraries and custom classes into a Docker image
- B. Store the image in an S3 bucket. Create a Lambda layer that uses the Docker image as the source
- C. Deploy the API's Lambda functions as Zip package
- D. Configure the packages to use the Lambda layer.
- E. Deploy the shared libraries and custom classes to a Docker image
- F. Upload the image to Amazon Elastic Container Registry (Amazon ECR). Create a Lambda layer that uses the Docker image as the source
- G. Deploy the API's Lambda functions as Zip package
- H. Configure the packages to use the Lambda layer.
- I. Deploy the shared libraries and custom classes to a Docker container in Amazon Elastic Container Service (Amazon ECS) by using the AWS Fargate launch type
- J. Deploy the API's Lambda functions as Zip package
- K. Configure the packages to use the deployed container as a Lambda layer.
- L. Deploy the shared libraries, custom classes, and code for the API's Lambda functions to a Docker image
- M. Upload the image to Amazon Elastic Container Registry (Amazon ECR). Configure the API's Lambda functions to use the Docker image as the deployment package.

**Answer: B**

#### Explanation:

Deploying the shared libraries and custom classes to a Docker image and uploading the image to Amazon Elastic Container Registry (Amazon ECR) and creating a Lambda layer that uses the Docker image as the source. Then, deploying the API's Lambda functions as Zip packages and configuring the packages to use the Lambda layer would meet the requirements for simplifying the deployment and optimizing for code reuse.

A Lambda layer is a distribution mechanism for libraries, custom runtimes, and other function dependencies. It allows you to manage your in-development function code separately from your dependencies, this way you can easily update your dependencies without having to update your entire function code.

By deploying the shared libraries and custom classes to a Docker image and uploading the image to Amazon Elastic Container Registry (ECR), it makes it easy to manage and version the dependencies. This way, the company can use the same version of the dependencies across different Lambda functions.

By creating a Lambda layer that uses the Docker image as the source, the company can configure the API's Lambda functions to use the layer, reducing the need to include the dependencies in each function package, and making it easy to update the dependencies across all functions at once.

Reference:

AWS Lambda Layers documentation: <https://docs.aws.amazon.com/lambda/latest/dg/configuration-layers.html>

AWS Elastic Container Registry (ECR) documentation: [https://aws.amazon.com/ecr/ Building Lambda Layers with Docker](https://aws.amazon.com/ecr/Building-Lambda-Layers-with-Docker) documentation:

<https://aws.amazon.com/blogs/compute/building-lambda-layers-with-docker/>

### NEW QUESTION 2

- (Exam Topic 1)

A large mobile gaming company has successfully migrated all of its on-premises infrastructure to the AWS Cloud. A solutions architect is reviewing the environment to ensure that it was built according to the design and that it is running in alignment with the Well-Architected Framework.

While reviewing previous monthly costs in Cost Explorer, the solutions architect notices that the creation and subsequent termination of several large instance types account for a high proportion of the costs. The solutions architect finds out that the company's developers are launching new Amazon EC2 instances as part of their testing and that the developers are not using the appropriate instance types.

The solutions architect must implement a control mechanism to limit the instance types that only the developers can launch.

Which solution will meet these requirements?

- A. Create a desired-instance-type managed rule in AWS Config
- B. Configure the rule with the instance types that are allowed
- C. Attach the rule to an event to run each time a new EC2 instance is launched.
- D. In the EC2 console, create a launch template that specifies the instance types that are allowed
- E. Assign the launch template to the developers' IAM accounts.
- F. Create a new IAM policy
- G. Specify the instance types that are allowed
- H. Attach the policy to an IAM group that contains the IAM accounts for the developers
- I. Use EC2 Image Builder to create an image pipeline for the developers and assist them in the creation of a golden image.

**Answer: C**

#### Explanation:

This is doable with IAM policy creation to restrict users to specific instance types. Found the below article. <https://blog.vizuri.com/limiting-allowed-aws-instance-type-with-iam-policy>

### NEW QUESTION 3

- (Exam Topic 1)

A company runs an IoT platform on AWS IoT sensors in various locations send data to the company's Node.js API servers on Amazon EC2 instances running behind an Application Load Balancer. The data is stored in an Amazon RDS MySQL DB instance that uses a 4 TB General Purpose SSD volume.

The number of sensors the company has deployed in the field has increased over time and is expected to grow significantly. The API servers are consistently overloaded and RDS metrics show high write latency.

Which of the following steps together will resolve the issues permanently and enable growth as new sensors are provisioned, while keeping this platform cost-efficient? (Select TWO.)

- A. Resize the MySQL General Purpose SSD storage to 6 TB to improve the volume's IOPS
- B. Re-architect the database tier to use Amazon Aurora instead of an RDS MySQL DB instance and add read replicas
- C. Leverage Amazon Kinesis Data Streams and AWS Lambda to ingest and process the raw data
- D. Use AWS X-Ray to analyze and debug application issues and add more API servers to match the load
- E. Re-architect the database tier to use Amazon DynamoDB instead of an RDS MySQL DB instance

**Answer:** CE

**Explanation:**

➤ Option C is correct because leveraging Amazon Kinesis Data Streams and AWS Lambda to ingest and process the raw data resolves the issues permanently and enable growth as new sensors are provisioned. Amazon Kinesis Data Streams is a serverless streaming data service that simplifies the capture, processing, and storage of data streams at any scale. Kinesis Data Streams can handle any amount of streaming data and process data from hundreds of thousands of sources with very low latency. AWS Lambda is a serverless compute service that lets you run code without provisioning or managing servers. Lambda can be triggered by Kinesis Data Streams events and process the data records in real time. Lambda can also scale automatically based on the incoming data volume. By using Kinesis Data Streams and Lambda, the company can reduce the load on the API servers and improve the performance and scalability of the data ingestion and processing layer3

➤ Option E is correct because re-architecting the database tier to use Amazon DynamoDB instead of an RDS MySQL DB instance resolves the issues permanently and enable growth as new sensors are provisioned. Amazon DynamoDB is a fully managed key-value and document database that delivers single-digit millisecond performance at any scale. DynamoDB supports auto scaling, which automatically adjusts read and write capacity based on actual traffic patterns. DynamoDB also supports on-demand capacity mode, which instantly accommodates up to double the previous peak traffic on a table. By using DynamoDB instead of RDS MySQL DB instance, the company can eliminate high write latency and improve scalability and performance of the database tier.

References: 1: <https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-volume-types.html> 2:

[https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/CHAP\\_AuroraOverview.html](https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/CHAP_AuroraOverview.html) 3:

<https://docs.aws.amazon.com/streams/latest/dev/introduction.html> : <https://docs.aws.amazon.com/lambda/latest/dg/welcome.html> :

<https://docs.aws.amazon.com/xray/latest/devguide/aws-xray.html> : <https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Introduction.html> :

**NEW QUESTION 4**

- (Exam Topic 1)

A company has migrated its forms-processing application to AWS. When users interact with the application, they upload scanned forms as files through a web application. A database stores user metadata and references to files that are stored in Amazon S3. The web application runs on Amazon EC2 instances and an Amazon RDS for PostgreSQL database.

When forms are uploaded, the application sends notifications to a team through Amazon Simple Notification Service (Amazon SNS). A team member then logs in and processes each form. The team member performs data validation on the form and extracts relevant data before entering the information into another system that uses an API.

A solutions architect needs to automate the manual processing of the forms. The solution must provide accurate form extraction, minimize time to market, and minimize long-term operational overhead.

Which solution will meet these requirements?

- A. Develop custom libraries to perform optical character recognition (OCR) on the form
- B. Deploy the libraries to an Amazon Elastic Kubernetes Service (Amazon EKS) cluster as an application tier
- C. Use this tier to process the forms when forms are uploaded
- D. Store the output in Amazon S3. Parse this output by extracting the data into an Amazon DynamoDB table
- E. Submit the data to the target system's API
- F. Host the new application tier on EC2 instances.
- G. Extend the system with an application tier that uses AWS Step Functions and AWS Lambda
- H. Configure this tier to use artificial intelligence and machine learning (AI/ML) models that are trained and hosted on an EC2 instance to perform optical character recognition (OCR) on the forms when forms are uploaded
- I. Store the output in Amazon S3. Parse this output by extracting the data that is required within the application tier
- J. Submit the data to the target system's API.
- K. Host a new application tier on EC2 instance
- L. Use this tier to call endpoints that host artificial intelligence and machine learning (AI/ML) models that are trained and hosted in Amazon SageMaker to perform optical character recognition (OCR) on the form
- M. Store the output in Amazon ElastiCache
- N. Parse this output by extracting the data that is required within the application tier
- O. Submit the data to the target system's API.
- P. Extend the system with an application tier that uses AWS Step Functions and AWS Lambda
- Q. Configure this tier to use Amazon Textract and Amazon Comprehend to perform optical character recognition (OCR) on the forms when forms are uploaded
- R. Store the output in Amazon S3. Parse this output by extracting the data that is required within the application tier
- S. Submit the data to the target system's API.

**Answer:** D

**Explanation:**

Extend the system with an application tier that uses AWS Step Functions and AWS Lambda. Configure this tier to use Amazon Textract and Amazon Comprehend to perform optical character recognition (OCR) on the forms when forms are uploaded. Store the output in Amazon S3. Parse this output by extracting the data that is required within the application tier. Submit the data to the target system's API. This solution meets the requirements of accurate form extraction, minimal time to market, and minimal long-term operational overhead. Amazon Textract and Amazon Comprehend are fully managed and serverless services that can perform OCR and extract relevant data from the forms, which eliminates the need to develop custom libraries or train and host models. Using AWS Step Functions and Lambda allows for easy automation of the process and the ability to scale as needed.

**NEW QUESTION 5**

- (Exam Topic 1)

A company is running an application in the AWS Cloud. The company's security team must approve the creation of all new IAM users. When a new IAM user is created, all access for the user must be removed automatically. The security team must then receive a notification to approve the user. The company has a multi-Region AWS CloudTrail trail in the AWS account.

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

- A. Create an Amazon EventBridge (Amazon CloudWatch Events) rule
- B. Define a pattern with the detail-type value set to AWS API Call via CloudTrail and an eventName of CreateUser.
- C. Configure CloudTrail to send a notification for the CreateUser event to an Amazon Simple Notification Service (Amazon SNS) topic.
- D. Invoke a container that runs in Amazon Elastic Container Service (Amazon ECS) with AWS Fargate technology to remove access
- E. Invoke an AWS Step Functions state machine to remove access.
- F. Use Amazon Simple Notification Service (Amazon SNS) to notify the security team.
- G. Use Amazon Pinpoint to notify the security team.

**Answer:** ADE

**Explanation:**

<https://docs.aws.amazon.com/prescriptive-guidance/latest/patterns/send-a-notification-when-an-iam-user-is-crea>

**NEW QUESTION 6**

- (Exam Topic 1)

A company is hosting a three-tier web application in an on-premises environment. Due to a recent surge in traffic that resulted in downtime and a significant financial impact, company management has ordered that the application be moved to AWS. The application is written in .NET and has a dependency on a MySQL database. A solutions architect must design a scalable and highly available solution to meet the demand of 200,000 daily users.

Which steps should the solutions architect take to design an appropriate solution?

- A. Use AWS Elastic Beanstalk to create a new application with a web server environment and an Amazon RDS MySQL Multi-AZ DB instance. The environment should launch a Network Load Balancer (NLB) in front of an Amazon EC2 Auto Scaling group in multiple Availability Zones. Use an Amazon Route 53 alias record to route traffic from the company's domain to the NLB.
- B. Use AWS CloudFormation to launch a stack containing an Application Load Balancer (ALB) in front of an Amazon EC2 Auto Scaling group spanning three Availability Zones.
- C. The stack should launch a Multi-AZ deployment of an Amazon Aurora MySQL DB cluster with a Retain deletion policy.
- D. Use an Amazon Route 53 alias record to route traffic from the company's domain to the ALB.
- E. Use AWS Elastic Beanstalk to create an automatically scaling web server environment that spans two separate Regions with an Application Load Balancer (ALB) in each Region.
- F. Create a Multi-AZ deployment of an Amazon Aurora MySQL DB cluster with a cross-Region read replica. Use Amazon Route 53 with a geoproximity routing policy to route traffic between the two Regions.
- G. Use AWS CloudFormation to launch a stack containing an Application Load Balancer (ALB) in front of an Amazon ECS cluster of Spot Instances spanning three Availability Zones. The stack should launch an Amazon RDS MySQL DB instance with a Snapshot deletion policy. Use an Amazon Route 53 alias record to route traffic from the company's domain to the ALB.

**Answer: C**

**Explanation:**

Using AWS CloudFormation to launch a stack with an Application Load Balancer (ALB) in front of an Amazon EC2 Auto Scaling group spanning three Availability Zones, a Multi-AZ deployment of an Amazon Aurora MySQL DB cluster with a Retain deletion policy, and an Amazon Route 53 alias record to route traffic from the company's domain to the ALB will ensure that

**NEW QUESTION 7**

- (Exam Topic 1)

A software company hosts an application on AWS with resources in multiple AWS accounts and Regions. The application runs on a group of Amazon EC2 instances in an application VPC located in the us-east-1 Region with an IPv4 CIDR block of 10.10.0.0/16. In a different AWS account, a shared services VPC is located in the us-east-2 Region with an IPv4 CIDR block of 10.10.10.0/24. When a cloud engineer uses AWS CloudFormation to attempt to peer the application VPC with the shared services VPC, an error message indicates a peering failure. Which factors could cause this error? (Choose two.)

- A. The IPv4 CIDR ranges of the two VPCs overlap.
- B. The VPCs are not in the same Region.
- C. One or both accounts do not have access to an Internet gateway.
- D. One of the VPCs was not shared through AWS Resource Access Manager.
- E. The IAM role in the peer acceptor account does not have the correct permissions.

**Answer: AE**

**Explanation:**

<https://aws.amazon.com/about-aws/whats-new/2017/11/announcing-support-for-inter-region-vpc-peering/>

**NEW QUESTION 8**

- (Exam Topic 1)

A company is developing and hosting several projects in the AWS Cloud. The projects are developed across multiple AWS accounts under the same organization in AWS Organizations. The company requires the cost for cloud infrastructure to be allocated to the owning project. The team responsible for all of the AWS accounts has discovered that several Amazon EC2 instances are lacking the Project tag used for cost allocation.

Which actions should a solutions architect take to resolve the problem and prevent it from happening in the future? (Select THREE.)

- A. Create an AWS Config rule in each account to find resources with missing tags.
- B. Create an SCP in the organization with a deny action for ec2:RunInstances if the Project tag is missing.
- C. Use Amazon Inspector in the organization to find resources with missing tags.
- D. Create an IAM policy in each account with a deny action for ec2:RunInstances if the Project tag is missing.
- E. Create an AWS Config aggregator for the organization to collect a list of EC2 instances with the missing Project tag.
- F. Use AWS Security Hub to aggregate a list of EC2 instances with the missing Project tag.

**Answer: ABE**

**Explanation:**

<https://docs.aws.amazon.com/config/latest/developerguide/config-rule-multi-account-deployment.html>

<https://docs.aws.amazon.com/config/latest/developerguide/aggregate-data.html>

[https://docs.aws.amazon.com/organizations/latest/userguide/orgs\\_manage\\_policies\\_scps\\_examples\\_tagging.htm](https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scps_examples_tagging.htm)

**NEW QUESTION 9**

- (Exam Topic 1)

A company is running an application in the AWS Cloud. The application runs on containers in an Amazon Elastic Container Service (Amazon ECS) cluster. The ECS tasks use the Fargate launch type. The application's data is relational and is stored in Amazon Aurora MySQL. To meet regulatory requirements, the application must be able to recover to a separate AWS Region in the event of an application failure. In case of a failure, no data can be lost. Which solution will meet these requirements with the LEAST amount of operational overhead?

- A. Provision an Aurora Replica in a different Region.

- B. Set up AWS DataSync for continuous replication of the data to a different Region.
- C. Set up AWS Database Migration Service (AWS DMS) to perform a continuous replication of the data to a different Region.
- D. Use Amazon Data Lifecycle Manager (Amazon DLM) to schedule a snapshot every 5 minutes.

**Answer:** A

**Explanation:**

Provision an Aurora Replica in a different Region will meet the requirement of the application being able to recover to a separate AWS Region in the event of an application failure, and no data can be lost, with the least amount of operational overhead.

**NEW QUESTION 10**

- (Exam Topic 1)

A publishing company's design team updates the icons and other static assets that an ecommerce web application uses. The company serves the icons and assets from an Amazon S3 bucket that is hosted in the company's production account. The company also uses a development account that members of the design team can access.

After the design team tests the static assets in the development account, the design team needs to load the assets into the S3 bucket in the production account. A solutions architect must provide the design team with access to the production account without exposing other parts of the web application to the risk of unwanted changes.

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

- A. In the production account, create a new IAM policy that allows read and write access to the S3 bucket.
- B. In the development account, create a new IAM policy that allows read and write access to the S3 bucket.
- C. In the production account, create a role
- D. Attach the new policy to the role
- E. Define the development account as a trusted entity.
- F. In the development account, create a role
- G. Attach the new policy to the role
- H. Define the production account as a trusted entity.
- I. In the development account, create a group that contains all the IAM users of the design team
- J. Attach a different IAM policy to the group to allow the sts:AssumeRole action on the role in the production account.
- K. In the development account, create a group that contains all the IAM users of the design team
- L. Attach a different IAM policy to the group to allow the sts:AssumeRole action on the role in the development account.

**Answer:** ACE

**Explanation:**

- > A. In the production account, create a new IAM policy that allows read and write access to the S3 bucket. The policy grants the necessary permissions to access the assets in the production S3 bucket.
- > C. In the production account, create a role. Attach the new policy to the role. Define the development account as a trusted entity. By creating a role and attaching the policy, and then defining the development account as a trusted entity, the development account can assume the role and access the production S3 bucket with the read and write permissions.
- > E. In the development account, create a group that contains all the IAM users of the design team. Attach a different IAM policy to the group to allow the sts:AssumeRole action on the role in the production account. The IAM policy attached to the group allows the design team members to assume the role created in the production account, thereby giving them access to the production S3 bucket.  
Step 1: Create a role in the Production Account; create the role in the Production account and specify the Development account as a trusted entity. You also limit the role permissions to only read and write access to the productionapp bucket. Anyone granted permission to use the role can read and write to the productionapp bucket. Step 2: Grant access to the role Sign in as an administrator in the Development account and allow the AssumeRole action on the UpdateApp role in the Production account. So, recap, production account you create the policy for S3, and you set development account as a trusted entity. Then on the development account you allow the sts:assumeRole action on the role in production account. [https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial\\_cross-account-with-roles.html](https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial_cross-account-with-roles.html)

**NEW QUESTION 10**

- (Exam Topic 1)

A software company has deployed an application that consumes a REST API by using Amazon API Gateway, AWS Lambda functions, and an Amazon DynamoDB table. The application is showing an increase in the number of errors during PUT requests. Most of the PUT calls come from a small number of clients that are authenticated with specific API keys.

A solutions architect has identified that a large number of the PUT requests originate from one client. The API is noncritical, and clients can tolerate retries of unsuccessful calls. However, the errors are displayed to customers and are causing damage to the API's reputation.

What should the solutions architect recommend to improve the customer experience?

- A. Implement retry logic with exponential backoff and irregular variation in the client application
- B. Ensure that the errors are caught and handled with descriptive error messages.
- C. Implement API throttling through a usage plan at the API Gateway level
- D. Ensure that the client application handles code 429 replies without error.
- E. Turn on API caching to enhance responsiveness for the production stage
- F. Run 10-minute load tests. Verify that the cache capacity is appropriate for the workload.
- G. Implement reserved concurrency at the Lambda function level to provide the resources that are needed during sudden increases in traffic.

**Answer:** B

**Explanation:**

<https://aws.amazon.com/premiumsupport/knowledge-center/aws-batch-requests-error/> <https://aws.amazon.com/premiumsupport/knowledge-center/api-gateway-429-limit/>

**NEW QUESTION 14**

- (Exam Topic 1)

A finance company hosts a data lake in Amazon S3. The company receives financial data records over SFTP each night from several third parties. The company runs its own SFTP server on an Amazon EC2 instance in a public subnet of a VPC. After the files are uploaded, they are moved to the data lake by a cron job that runs on the same instance. The SFTP server is reachable on DNS sftp.examWe.com through the use of Amazon Route 53.

What should a solutions architect do to improve the reliability and scalability of the SFTP solution?

- A. Move the EC2 instance into an Auto Scaling group
- B. Place the EC2 instance behind an Application Load Balancer (ALB). Update the DNS record sftp.example.com in Route 53 to point to the ALB.
- C. Migrate the SFTP server to AWS Transfer for SFT
- D. Update the DNS record sftp.example.com in Route 53 to point to the server endpoint hostname.
- E. Migrate the SFTP server to a file gateway in AWS Storage Gateway
- F. Update the DNS record sftp.example.com in Route 53 to point to the file gateway endpoint.
- G. Place the EC2 instance behind a Network Load Balancer (NLB). Update the DNS record sftp.example.com in Route 53 to point to the NLB.

**Answer: B**

**Explanation:**

<https://aws.amazon.com/aws-transfer-family/faqs/> <https://docs.aws.amazon.com/transfer/latest/userguide/what-is-aws-transfer-family.html>  
[https://aws.amazon.com/about-aws/whats-new/2018/11/aws-transfer-for-sftp-fully-managed-sftp-for-s3/?nc1=h\\_](https://aws.amazon.com/about-aws/whats-new/2018/11/aws-transfer-for-sftp-fully-managed-sftp-for-s3/?nc1=h_)

**NEW QUESTION 18**

- (Exam Topic 1)

A company wants to migrate to AWS. The company wants to use a multi-account structure with centrally managed access to all accounts and applications. The company also wants to keep the traffic on a private network. Multi-factor authentication (MFA) is required at login, and specific roles are assigned to user groups. The company must create separate accounts for development, staging, production, and shared network. The production account and the shared network account must have connectivity to all accounts. The development account and the staging account must have access only to each other. Which combination of steps should a solutions architect take to meet these requirements? (Choose three.)

- A. Deploy a landing zone environment by using AWS Control Tower
- B. Enroll accounts and invite existing accounts into the resulting organization in AWS Organizations.
- C. Enable AWS Security Hub in all accounts to manage cross-account access
- D. Collect findings through AWS CloudTrail to force MFA login.
- E. Create transit gateways and transit gateway VPC attachments in each account
- F. Configure appropriate route tables.
- G. Set up and enable AWS IAM Identity Center (AWS Single Sign-On). Create appropriate permission sets with required MFA for existing accounts.
- H. Enable AWS Control Tower in all accounts to manage routing between accounts
- I. Collect findings through AWS CloudTrail to force MFA login.
- J. Create IAM users and groups
- K. Configure MFA for all users
- L. Set up Amazon Cognito user pools and identity pools to manage access to accounts and between accounts.

**Answer: ACD**

**Explanation:**

The correct answer would be options A, C and D, because they address the requirements outlined in the question. A. Deploying a landing zone environment using AWS Control Tower and enrolling accounts in an organization in AWS Organizations allows for a centralized management of access to all accounts and applications. C. Creating transit gateways and transit gateway VPC attachments in each account and configuring appropriate route tables allows for private network traffic, and ensures that the production account and shared network account have connectivity to all accounts, while the development and staging accounts have access only to each other. D. Setting up and enabling AWS IAM Identity Center (AWS Single Sign-On) and creating appropriate permission sets with required MFA for existing accounts allows for multi-factor authentication at login and specific roles to be assigned to user groups.

**NEW QUESTION 23**

- (Exam Topic 1)

A company has an organization in AWS Organizations that has a large number of AWS accounts. One of the AWS accounts is designated as a transit account and has a transit gateway that is shared with all of the other AWS accounts. AWS Site-to-Site VPN connections are configured between all of the company's global offices and the transit account. The company has AWS Config enabled on all of its accounts. The company's networking team needs to centrally manage a list of internal IP address ranges that belong to the global offices. Developers will reference this list to gain access to applications securely. Which solution meets these requirements with the LEAST amount of operational overhead?

- A. Create a JSON file that is hosted in Amazon S3 and that lists all of the internal IP address ranges. Configure an Amazon Simple Notification Service (Amazon SNS) topic in each of the accounts that can be involved when the JSON file is updated.
- B. Subscribe an AWS Lambda function to the SNS topic to update all relevant security group rules with the updated IP address ranges.
- C. Create a new AWS Config managed rule that contains all of the internal IP address ranges. Use the rule to check the security groups in each of the accounts to ensure compliance with the list of IP address ranges.
- D. Configure the rule to automatically remediate any noncompliant security group that is detected.
- E. In the transit account, create a VPC prefix list with all of the internal IP address ranges.
- F. Use AWS Resource Access Manager to share the prefix list with all of the other accounts.
- G. Use the shared prefix list to configure security group rules in the other accounts.
- H. In the transit account, create a security group with all of the internal IP address ranges.
- I. Configure the security groups in the other accounts to reference the transit account's security group by using a nested security group reference of `*<transit-account-id>/.sg-1a2b3c4d`.

**Answer: C**

**Explanation:**

Customer-managed prefix lists — Sets of IP address ranges that you define and manage. You can share your prefix list with other AWS accounts, enabling those accounts to reference the prefix list in their own resources. <https://docs.aws.amazon.com/vpc/latest/userguide/managed-prefix-lists.html> A VPC prefix list is created in the transit account with all of the internal IP address ranges, and then shared to all of the other accounts using AWS Resource Access Manager. This allows for central management of the IP address ranges, and eliminates the need for manual updates to security group rules in each account. This solution also allows for compliance checks to be run using AWS Config and for any non-compliant security groups to be automatically remediated.

**NEW QUESTION 28**

- (Exam Topic 1)

A company has an application that runs on Amazon EC2 instances. A solutions architect is designing VPC infrastructure in an AWS Region where the application needs to access an Amazon Aurora DB cluster. The EC2 instances are all associated with the same security group. The DB cluster is associated with its own security group.

The solutions architect needs to add rules to the security groups to provide the application with least privilege access to the DB cluster.

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

- A. Add an inbound rule to the EC2 instances' security group
- B. Specify the DB cluster's security group as the source over the default Aurora port.
- C. Add an outbound rule to the EC2 instances' security group
- D. Specify the DB cluster's security group as the destination over the default Aurora port.
- E. Add an inbound rule to the DB cluster's security group
- F. Specify the EC2 instances' security group as the source over the default Aurora port.
- G. Add an outbound rule to the DB cluster's security group
- H. Specify the EC2 instances' security group as the destination over the default Aurora port.
- I. Add an outbound rule to the DB cluster's security group
- J. Specify the EC2 instances' security group as the destination over the ephemeral ports.

**Answer:** AB

**Explanation:**

\* B. Add an outbound rule to the EC2 instances' security group. Specify the DB cluster's security group as the destination over the default Aurora port. This allows the instances to make outbound connections to the DB cluster on the default Aurora port. C. Add an inbound rule to the DB cluster's security group. Specify the EC2 instances' security group as the source over the default Aurora port. This allows connections to the DB cluster from the EC2 instances on the default Aurora port.

**NEW QUESTION 30**

- (Exam Topic 1)

A company has developed APIs that use Amazon API Gateway with Regional endpoints. The APIs call AWS Lambda functions that use API Gateway authentication mechanisms. After a design review, a solutions architect identifies a set of APIs that do not require public access.

The solutions architect must design a solution to make the set of APIs accessible only from a VPC. All APIs need to be called with an authenticated user.

Which solution will meet these requirements with the LEAST amount of effort?

- A. Create an internal Application Load Balancer (ALB). Create a target group
- B. Select the Lambda function to call
- C. Use the ALB DNS name to call the API from the VPC.
- D. Remove the DNS entry that is associated with the API in API Gateway
- E. Create a hosted zone in Amazon Route 53. Create a CNAME record in the hosted zone
- F. Update the API in API Gateway with the CNAME record
- G. Use the CNAME record to call the API from the VPC.
- H. Update the API endpoint from Regional to private in API Gateway
- I. Create an interface VPC endpoint in the VPC
- J. Create a resource policy, and attach it to the API
- K. Use the VPC endpoint to call the API from the VPC.
- L. Deploy the Lambda functions inside the VPC
- M. Provision an EC2 instance, and install an Apache server. From the Apache server, call the Lambda function
- N. Use the internal CNAME record of the EC2 instance to call the API from the VPC.

**Answer:** C

**Explanation:**

This solution requires the least amount of effort as it only requires to update the API endpoint to private in API Gateway and create an interface VPC endpoint. Then create a resource policy and attach it to the API. This will make the API only accessible from the VPC and still keep the authentication mechanism intact.

Reference:

> <https://aws.amazon.com/api-gateway/features/>

**NEW QUESTION 32**

- (Exam Topic 1)

A company gives users the ability to upload images from a custom application. The upload process invokes an AWS Lambda function that processes and stores the image in an Amazon S3 bucket. The application invokes the Lambda function by using a specific function version ARN.

The Lambda function accepts image processing parameters by using environment variables. The company often adjusts the environment variables of the Lambda function to achieve optimal image processing output. The company tests different parameters and publishes a new function version with the updated environment variables after validating results. This update process also requires frequent changes to the custom application to invoke the new function version ARN. These changes cause interruptions for users.

A solutions architect needs to simplify this process to minimize disruption to users. Which solution will meet these requirements with the LEAST operational overhead?

- A. Directly modify the environment variables of the published Lambda function version
- B. Use the LATEST version to test image processing parameters.
- C. Create an Amazon DynamoDB table to store the image processing parameters
- D. Modify the Lambda function to retrieve the image processing parameters from the DynamoDB table.
- E. Directly code the image processing parameters within the Lambda function and remove the environment variable
- F. Publish a new function version when the company updates the parameters.
- G. Create a Lambda function alias
- H. Modify the client application to use the function alias ARN
- I. Reconfigure the Lambda alias to point to new versions of the function when the company finishes testing.

**Answer:** D

**Explanation:**

A Lambda function alias allows you to point to a specific version of a function and also can be updated to point to a new version of the function without modifying

the client application. This way, the company can test different versions of the function with different environment variables and, once the optimal parameters are found, update the alias to point to the new version, without the need to update the client application.

By using this approach, the company can simplify the process of updating the environment variables, minimize disruption to users, and reduce the operational overhead.

Reference:

AWS Lambda documentation: <https://aws.amazon.com/lambda/>

AWS Lambda Aliases documentation: <https://docs.aws.amazon.com/lambda/latest/dg/aliases-intro.html> AWS Lambda versioning and aliases documentation: <https://aws.amazon.com/blogs/compute/versioning-aliases-in-aws-lambda/>

### NEW QUESTION 37

- (Exam Topic 1)

An AWS partner company is building a service in AWS Organizations using its organization named org. This service requires the partner company to have access to AWS resources in a customer account, which is in a separate organization named org2. The company must establish least privilege security access using an API or command line tool to the customer account.

What is the MOST secure way to allow org1 to access resources in org2?

- A. The customer should provide the partner company with their AWS account access keys to log in and perform the required tasks.
- B. The customer should create an IAM user and assign the required permissions to the IAM user. The customer should then provide the credentials to the partner company to log in and perform the required tasks.
- C. The customer should create an IAM role and assign the required permissions to the IAM role.
- D. The partner company should then use the IAM role's Amazon Resource Name (ARN) when requesting access to perform the required tasks.
- E. The customer should create an IAM role and assign the required permissions to the IAM role.
- F. The partner company should then use the IAM role's Amazon Resource Name (ARN). Including the external ID in the IAM role's trust policy, when requesting access to perform the required tasks.

**Answer: C**

#### Explanation:

<https://docs.aws.amazon.com/IAM/latest/UserGuide/confused-deputy.html>

This is the most secure way to allow org1 to access resources in org2 because it allows for least privilege security access. The customer should create an IAM role and assign the required permissions to the IAM role. The partner company should then use the IAM role's Amazon Resource Name (ARN) and include the external ID in the IAM role's trust policy when requesting access to perform the required tasks. This ensures that the partner company can only access the resources that it needs and only from the specific customer account.

### NEW QUESTION 38

- (Exam Topic 1)

A company developed a pilot application by using AWS Elastic Beanstalk and Java. To save costs during development, the company's development team deployed the application into a single-instance environment. Recent tests indicate that the application consumes more CPU than expected. CPU utilization is regularly greater than 85%, which causes some performance bottlenecks.

A solutions architect must mitigate the performance issues before the company launches the application to production.

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

- A. Create a new Elastic Beanstalk application.
- B. Select a load-balanced environment type.
- C. Select all Availability Zones.
- D. Add a scale-out rule that will run if the maximum CPU utilization is over 85% for 5 minutes.
- E. Create a second Elastic Beanstalk environment.
- F. Apply the traffic-splitting deployment policy.
- G. Specify a percentage of incoming traffic to direct to the new environment in the average CPU utilization is over 85% for 5 minutes.
- H. Modify the existing environment's capacity configuration to use a load-balanced environment type. Select all Availability Zones.
- I. Add a scale-out rule that will run if the average CPU utilization is over 85% for 5 minutes.
- J. Select the Rebuild environment action with the load balancing option. Select an Availability Zone. Add a scale-out rule that will run if the sum CPU utilization is over 85% for 5 minutes.

**Answer: C**

#### Explanation:

This solution will meet the requirements with the least operational overhead because it allows the company to modify the existing environment's capacity configuration, so it becomes a load-balanced environment type. By selecting all availability zones, the company can ensure that the application is running in multiple availability zones, which can help to improve the availability and scalability of the application. The company can also add a scale-out rule that will run if the average CPU utilization is over 85% for 5 minutes, which can help to mitigate the performance issues. This solution does not require creating new Elastic Beanstalk environments or rebuilding the existing one, which reduces the operational overhead.

You can refer to the AWS Elastic Beanstalk documentation for more information on how to use this service: <https://aws.amazon.com/elasticbeanstalk/>. You can refer to the AWS documentation for more information on how to use autoscaling: <https://aws.amazon.com/autoscaling/>.

### NEW QUESTION 40

- (Exam Topic 1)

A company is subject to regulatory audits of its financial information. External auditors who use a single AWS account need access to the company's AWS account. A solutions architect must provide the auditors with secure, read-only access to the company's AWS account. The solution must comply with AWS security best practices.

Which solution will meet these requirements?

- A. In the company's AWS account, create resource policies for all resources in the account to grant access to the auditors' AWS account.
- B. Assign a unique external ID to the resource policy.
- C. In the company's AWS account, create an IAM role that trusts the auditors' AWS account. Create an IAM policy that has the required permission.
- D. Attach the policy to the role.
- E. Assign a unique external ID to the role's trust policy.
- F. In the company's AWS account, create an IAM user.
- G. Attach the required IAM policies to the IAM user. Create API access keys for the IAM user.
- H. Share the access keys with the auditors.



I. In the company's AWS account, create an IAM group that has the required permissions  
J. Add the IAM users to the IAM group.

**Answer: B**

**Explanation:**

This solution will allow the external auditors to have read-only access to the company's AWS account while being compliant with AWS security best practices. By creating an IAM role, which is a secure and flexible way of granting access to AWS resources, and trusting the auditors' AWS account, the company can ensure that the auditors only have the permissions that are required for their role and nothing more. Assigning a unique external ID to the role's trust policy, it will ensure that only the auditors' AWS account can assume the role.

Reference:

AWS IAM Roles documentation: <https://aws.amazon.com/iam/features/roles/> AWS IAM Best practices: <https://aws.amazon.com/iam/security-best-practices/>

**NEW QUESTION 44**

- (Exam Topic 1)

A company has developed a web application. The company is hosting the application on a group of Amazon EC2 instances behind an Application Load Balancer. The company wants to improve the security posture of the application and plans to use AWS WAF web ACLs. The solution must not adversely affect legitimate traffic to the application.

How should a solutions architect configure the web ACLs to meet these requirements?

- A. Set the action of the web ACL rules to Count
- B. Enable AWS WAF logging Analyze the requests for false positives Modify the rules to avoid any false positive Over time change the action of the web ACL rules from Count to Block.
- C. Use only rate-based rules in the web ACL
- D. and set the throttle limit as high as possible Temporarily block all requests that exceed the limit
- E. Define nested rules to narrow the scope of the rate tracking.
- F. Set the action of the web ACL rules to Block
- G. Use only AWS managed rule groups in the web ACLs Evaluate the rule groups by using Amazon CloudWatch metrics with AWS WAF sampled requests or AWS WAF logs.
- H. Use only custom rule groups in the web ACL
- I. and set the action to Allow Enable AWS WAF logging Analyze the requests for false positives Modify the rules to avoid any false positive Over time, change the action of the web ACL rules from Allow to Block.

**Answer: A**

**Explanation:**

<https://aws.amazon.com/premiumsupport/knowledge-center/waf-analyze-count-action-rules/>

**NEW QUESTION 48**

- (Exam Topic 1)

A company is planning to store a large number of archived documents and make the documents available to employees through the corporate intranet. Employees will access the system by connecting through a client VPN service that is attached to a VPC. The data must not be accessible to the public.

The documents that the company is storing are copies of data that is held on physical media elsewhere. The number of requests will be low. Availability and speed of retrieval are not concerns of the company.

Which solution will meet these requirements at the LOWEST cost?

- A. Create an Amazon S3 bucket
- B. Configure the S3 bucket to use the S3 One Zone-Infrequent Access (S3 One Zone-IA) storage class as default
- C. Configure the S3 bucket for website hosting
- D. Create an S3 interface endpoint
- E. Configure the S3 bucket to allow access only through that endpoint.
- F. Launch an Amazon EC2 instance that runs a web server
- G. Attach an Amazon Elastic File System (Amazon EFS) file system to store the archived data in the EFS One Zone-Infrequent Access (EFS One Zone-IA) storage class Configure the instance security groups to allow access only from private networks.
- H. Launch an Amazon EC2 instance that runs a web server Attach an Amazon Elastic Block Store (Amazon EBS) volume to store the archived data
- I. Use the Cold HDD (sc1) volume type
- J. Configure the instance security groups to allow access only from private networks.
- K. Create an Amazon S3 bucket
- L. Configure the S3 bucket to use the S3 Glacier Deep Archive storage class as default
- M. Configure the S3 bucket for website hosting
- N. Create an S3 interface endpoint
- O. Configure the S3 bucket to allow access only through that endpoint.

**Answer: D**

**Explanation:**

The S3 Glacier Deep Archive storage class is the lowest-cost storage class offered by Amazon S3, and it is designed for archival data that is accessed infrequently and for which retrieval time of several hours is acceptable. S3 interface endpoint for the VPC ensures that access to the bucket is only from resources within the VPC and this will meet the requirement of not being accessible to the public. And also, S3 bucket can be configured for website hosting, and this will allow employees to access the documents through the corporate intranet. Using an EC2 instance and a file system or block store would be more expensive and unnecessary because the number of requests to the data will be low and availability and speed of retrieval are not concerns. Additionally, using Amazon S3 bucket will provide durability, scalability and availability of data.

**NEW QUESTION 49**

- (Exam Topic 1)

A company plans to refactor a monolithic application into a modern application designed for AWS. The CI/CD pipeline needs to be upgraded to support the modern design for the application with the following requirements

- It should allow changes to be released several times every hour.
- \* It should be able to roll back the changes as quickly as possible Which design will meet these requirements?

- A. Deploy a CI-CD pipeline that incorporates AMIs to contain the application and their configurations
- B. Specify AWS Elastic Beanstalk to stage in a secondary environment as the deployment target for the CI/CD pipeline of the application
- C. To deploy swap the staging and production environment URLs.
- D. Use AWS Systems Manager to re-provision the infrastructure for each deployment
- E. Update the Amazon EC2 user data to pull the latest code artifact from Amazon S3 and use Amazon Route 53 weighted routing to point to the new environment
- F. Roll out application updates as part of an Auto Scaling event using prebuilt AMI
- G. Use new versions of the AMIs to add instances, and phase out all instances that use the previous AMI version with the configured termination policy during a deployment event.

**Answer: B**

**Explanation:**

It is the fastest when it comes to rollback and deploying changes every hour

**NEW QUESTION 54**

- (Exam Topic 1)

A company that uses AWS Organizations allows developers to experiment on AWS. As part of the landing zone that the company has deployed, developers use their company email address to request an account. The company wants to ensure that developers are not launching costly services or running services unnecessarily. The company must give developers a fixed monthly budget to limit their AWS costs.

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

- A. Create an SCP to set a fixed monthly account usage limit
- B. Apply the SCP to the developer accounts.
- C. Use AWS Budgets to create a fixed monthly budget for each developer's account as part of the account creation process.
- D. Create an SCP to deny access to costly services and components
- E. Apply the SCP to the developer accounts.
- F. Create an IAM policy to deny access to costly services and components
- G. Apply the IAM policy to the developer accounts.
- H. Create an AWS Budgets alert action to terminate services when the budgeted amount is reached. Configure the action to terminate all services.
- I. Create an AWS Budgets alert action to send an Amazon Simple Notification Service (Amazon SNS) notification when the budgeted amount is reached
- J. Invoke an AWS Lambda function to terminate all services.

**Answer: BCF**

**Explanation:**

- > Option A is incorrect because creating an SCP to set a fixed monthly account usage limit is not possible. SCPs are policies that specify the services and actions that users and roles can use in the member accounts of an AWS Organization. SCPs cannot enforce budget limits or prevent users from launching costly services or running services unnecessarily1
  - > Option B is correct because using AWS Budgets to create a fixed monthly budget for each developer's account as part of the account creation process meets the requirement of giving developers a fixed monthly budget to limit their AWS costs. AWS Budgets allows you to plan your service usage, service costs, and instance reservations. You can create budgets that alert you when your costs or usage exceed (or are forecasted to exceed) your budgeted amount2
  - > Option C is correct because creating an SCP to deny access to costly services and components meets the requirement of ensuring that developers are not launching costly services or running services unnecessarily. SCPs can restrict access to certain AWS services or actions based on conditions such as region, resource tags, or request time. For example, an SCP can deny access to Amazon Redshift clusters or Amazon EC2 instances with certain instance types1
  - > Option D is incorrect because creating an IAM policy to deny access to costly services and components is not sufficient to meet the requirement of ensuring that developers are not launching costly services or running services unnecessarily. IAM policies can only control access to resources within a single AWS account. If developers have multiple accounts or can create new accounts, they can bypass the IAM policy restrictions. SCPs can apply across multiple accounts within an AWS Organization and prevent users from creating new accounts that do not comply with the SCP rules3
  - > Option E is incorrect because creating an AWS Budgets alert action to terminate services when the budgeted amount is reached is not possible. AWS Budgets alert actions can only perform one of the following actions: apply an IAM policy, apply an SCP, or send a notification through Amazon SNS. AWS Budgets alert actions cannot terminate services directly.
  - > Option F is correct because creating an AWS Budgets alert action to send an Amazon SNS notification when the budgeted amount is reached and invoking an AWS Lambda function to terminate all services meets the requirement of giving developers a fixed monthly budget to limit their AWS costs. AWS Budgets alert actions can send notifications through Amazon SNS when a budget threshold is breached. Amazon SNS can trigger an AWS Lambda function that can perform custom logic such as terminating all services in the developer's account. This way, developers cannot exceed their budget limit and incur additional costs.
- References: 1: [https://docs.aws.amazon.com/organizations/latest/userguide/orgs\\_manage\\_policies\\_scps.html](https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scps.html) 2: <https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/budgets-create.html> 3: <https://docs.aws.amazon.com/IAM/latest/UserGuide/introduction.html> : <https://docs.aws.amazon.com/cost-management/latest/userguide/budgets-actions.html> : <https://docs.aws.amazon.com/sns/latest/dg/sns-lambda.html> : <https://docs.aws.amazon.com/lambda/latest/dg/welcome.html>

**NEW QUESTION 56**

- (Exam Topic 1)

A company's solutions architect is reviewing a new internally developed application in a sandbox AWS account. The application uses an AWS Auto Scaling group of Amazon EC2 instances that have an IAM instance profile attached. Part of the application logic creates and accesses secrets from AWS Secrets Manager. The company has an AWS Lambda function that calls the application API to test the functionality. The company also has created an AWS CloudTrail trail in the account. The application's developer has attached the SecretsManagerReadOnly AWS managed IAM policy to an IAM role. The IAM role is associated with the instance profile that is attached to the EC2 instances. The solutions architect has invoked the Lambda function for testing.

The solutions architect must replace the SecretsManagerReadOnly policy with a new policy that provides least privilege access to the Secrets Manager actions that the application requires.

What is the MOST operationally efficient solution that meets these requirements?

- A. Generate a policy based on CloudTrail events for the IAM role. Use the generated policy output to create a new IAM policy. Use the newly generated IAM policy to replace the SecretsManagerReadOnly policy that is attached to the IAM role.
- B. Create an analyzer in AWS Identity and Access Management Access Analyzer. Use the IAM role's Access Advisor findings to create a new IAM policy. Use the newly created IAM policy to replace the SecretsManagerReadOnly policy that is attached to the IAM role.
- C. Use the `aws cloudtrail lookup-events` AWS CLI command to filter and export CloudTrail events that are related to Secrets Manager. Use a new IAM policy that contains the actions from CloudTrail to replace the SecretsManagerReadOnly policy that is attached to the IAM role.

D. Use the IAM policy simulator to generate an IAM policy for the IAM role Use the newly generated IAM policy to replace the SecretsManagerReadWnte policy that is attached to the IAM role

**Answer: B**

**Explanation:**

The IAM policy simulator will generate a policy that contains only the necessary permissions for the application to access Secrets Manager, providing the least privilege necessary to get the job done. This is the most efficient solution as it will not require additional steps such as analyzing CloudTrail events or manually creating and testing an IAM policy.

You can use the IAM policy simulator to generate an IAM policy for an IAM role by specifying the role and the API actions and resources that the application or service requires. The simulator will then generate an IAM policy that grants the least privilege access to those actions and resources.

Once you have generated an IAM policy using the simulator, you can replace the existing SecretsManagerReadWnte policy that is attached to the IAM role with the newly generated policy. This will ensure that the application or service has the least privilege access to the Secrets Manager actions that it requires.

You can access the IAM policy simulator through the IAM console, AWS CLI, and AWS SDKs. Here is the link for more information:

[https://docs.aws.amazon.com/IAM/latest/UserGuide/access\\_policies\\_simulator.html](https://docs.aws.amazon.com/IAM/latest/UserGuide/access_policies_simulator.html)

**NEW QUESTION 60**

- (Exam Topic 1)

A company runs its application in the eu-west-1 Region and has one account for each of its environments development, testing, and production All the environments are running 24 hours a day 7 days a week by using stateful Amazon EC2 instances and Amazon RDS for MySQL databases The databases are between 500 GB and 800 GB in size

The development team and testing team work on business days during business hours, but the production environment operates 24 hours a day. 7 days a week.

The company wants to reduce costs AH resources are tagged with an environment tag with either development, testing, or production as the key. What should a solutions architect do to reduce costs with the LEAST operational effort?

- A. Create an Amazon EventBridge (Amazon CloudWatch Events) rule that runs once every day Configure the rule to invoke one AWS Lambda function that starts or stops instances based on the tag day and time.
- B. Create an Amazon EventBridge (Amazon CloudWatch Events) rule that runs every business day in the evening
- C. Configure the rule to invoke an AWS Lambda function that stops instances based on thetag-Create a second EventBridge (CloudWatch Events) rule that runs every business day in the morning Configure the second rule to invoke another Lambda function that starts instances based on the tag
- D. Create an Amazon EventBridge (Amazon CloudWatch Events) rule that runs every business day in the evening Configure the rule to invoke an AWS Lambda function that terminates instances based on the tag Create a second EventBridge (CloudWatch Events) rule that runs every business day in the morning Configure the second rule to invoke another Lambda function that restores the instances from their last backup based on the tag.
- E. Create an Amazon EventBridge rule that runs every hou
- F. Configure the rule to invoke one AWS Lambda function that terminates or restores instances from their last backup based on the ta
- G. day, and time.

**Answer: B**

**Explanation:**

Creating an Amazon EventBridge rule that runs every business day in the evening to stop instances and another rule that runs every business day in the morning to start instances based on the tag will reduce costs with the least operational effort. This approach allows for instances to be stopped during non-business hours when they are not in use, reducing the costs associated with running them. It also allows for instances to be started again in the morning when the development and testing teams need to use them.

**NEW QUESTION 65**

- (Exam Topic 1)

A company runs a Java application that has complex dependencies on VMs that are in the company's data center. The application is stable. but the company wants to modernize the technology stack. The company wants to migrate the application to AWS and minimize the administrative overhead to maintain the servers.

Which solution will meet these requirements with the LEAST code changes?

- A. Migrate the application to Amazon Elastic Container Service (Amazon ECS) on AWS Fargate by using AWS App2Containe
- B. Store container images in Amazon Elastic Container Registry (Amazon ECR). Grant the ECS task execution role permission 10 access the ECR image repositor
- C. Configure Amazon ECS to use an Application Load Balancer (ALB). Use the ALB to interact with the application.
- D. Migrate the application code to a container that runs in AWS Lambd
- E. Build an Amazon API Gateway REST API with Lambda integratio
- F. Use API Gateway to interact with the application.
- G. Migrate the application to Amazon Elastic Kubernetes Service (Amazon EKS) on EKS managed node groups by using AWS App2Containe
- H. Store container images in Amazon Elastic Container Registry (Amazon ECR). Give the EKS nodes permission to access the ECR image repositor
- I. Use Amazon API Gateway to interact with the application.
- J. Migrate the application code to a container that runs in AWS Lambd
- K. Configure Lambda to use an Application Load Balancer (ALB). Use the ALB to interact with the application.

**Answer: A**

**Explanation:**

According to the AWS documentation<sup>1</sup>, AWS App2Container (A2C) is a command line tool for migrating and modernizing Java and .NET web applications into container format. AWS A2C analyzes and builds an inventory of applications running in bare metal, virtual machines, Amazon Elastic Compute Cloud (EC2) instances, or in the cloud. You can use AWS A2C to generate container images for your applications and deploy them on Amazon ECS or Amazon EKS.

Option A meets the requirements of the scenario because it allows you to migrate your existing Java application to AWS and minimize the administrative overhead to maintain the servers. You can use AWS A2C to analyze your application dependencies, extract application artifacts, and generate a Dockerfile. You can then store your container images in Amazon ECR, which is a fully managed container registry service. You can use AWS Fargate as the launch type for your Amazon ECS cluster, which is a serverless compute engine that eliminates the need to provision and manage servers for your containers. You can grant the ECS task execution role permission to access the ECR image repository, which allows your tasks to pull images from ECR. You can configure Amazon ECS to use an ALB, which is a load balancer that distributes traffic across multiple targets in multiple Availability Zones using HTTP or HTTPS protocols. You can use the ALB to interact with your application.

**NEW QUESTION 69**

- (Exam Topic 1)

A company is in the process of implementing AWS Organizations to constrain its developers to use only Amazon EC2, Amazon S3 and Amazon DynamoDB. The developers account resides in a dedicated organizational unit (OU). The solutions architect has implemented the following SCP on the developers account:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "AllowEC2",
      "Effect": "Allow",
      "Action": "ec2:*",
      "Resource": "*"
    },
    {
      "Sid": "AllowDynamoDB",
      "Effect": "Allow",
      "Action": "dynamodb:*",
      "Resource": "*"
    },
    {
      "Sid": "AllowS3",
      "Effect": "Allow",
      "Action": "s3:*",
      "Resource": "*"
    }
  ]
}
```

When this policy is deployed, IAM users in the developers account are still able to use AWS services that are not listed in the policy. What should the solutions architect do to eliminate the developers' ability to use services outside the scope of this policy?

- A. Create an explicit deny statement for each AWS service that should be constrained
- B. Remove the Full AWS Access SCP from the developer account's OU
- C. Modify the Full AWS Access SCP to explicitly deny all services
- D. Add an explicit deny statement using a wildcard to the end of the SCP

**Answer: B**

**Explanation:**

[https://docs.aws.amazon.com/organizations/latest/userguide/orgs\\_manage\\_policies\\_inheritance\\_auth.html](https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_inheritance_auth.html)

**NEW QUESTION 72**

- (Exam Topic 1)

A company is using AWS Organizations to manage multiple AWS accounts. For security purposes, the company requires the creation of an Amazon Simple Notification Service (Amazon SNS) topic that enables integration with a third-party alerting system in all the Organizations member accounts.

A solutions architect used an AWS CloudFormation template to create the SNS topic and stack sets to automate the deployment of CloudFormation stacks. Trusted access has been enabled in Organizations.

What should the solutions architect do to deploy the CloudFormation StackSets in all AWS accounts?

- A. Create a stack set in the Organizations member account
- B. Use service-managed permission
- C. Set deployment options to deploy to an organization
- D. Use CloudFormation StackSets drift detection.
- E. Create stacks in the Organizations member account
- F. Use self-service permission
- G. Set deployment options to deploy to an organization
- H. Enable the CloudFormation StackSets automatic deployment.
- I. Create a stack set in the Organizations management account. Use service-managed permission.
- J. Set deployment options to deploy to the organization
- K. Enable CloudFormation StackSets automatic deployment.
- L. Create stacks in the Organizations management account
- M. Use service-managed permission
- N. Set deployment options to deploy to the organization
- O. Enable CloudFormation StackSets drift detection.

**Answer: C**

**Explanation:**

<https://aws.amazon.com/blogs/aws/use-cloudformation-stacksets-to-provision-resources-across-multiple-aws-ac>

**NEW QUESTION 76**

- (Exam Topic 1)

A company hosts a Git repository in an on-premises data center. The company uses webhooks to invoke functionality that runs in the AWS Cloud. The company hosts the webhook logic on a set of Amazon EC2 instances in an Auto Scaling group that the company set as a target for an Application Load Balancer (ALB). The Git server calls the ALB for the configured webhooks. The company wants to move the solution to a serverless architecture.

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

- A. For each webhook, create and configure an AWS Lambda function UR
- B. Update the Git servers to call the individual Lambda function URLs.
- C. Create an Amazon API Gateway HTTP AP
- D. Implement each webhook logic in a separate AWS Lambda functio
- E. Update the Git servers to call the API Gateway endpoint.
- F. Deploy the webhook logic to AWS App Runne
- G. Create an ALB, and set App Runner as the target.Update the Git servers to call the ALB endpoint.
- H. Containerize the webhook logi
- I. Create an Amazon Elastic Container Service (Amazon ECS) cluster, and run the webhook logic in AWS Fargat
- J. Create an Amazon API Gateway REST API, and set Fargate as the targe
- K. Update the Git servers to call the API Gateway endpoint.

**Answer: B**

**Explanation:**

<https://aws.amazon.com/solutions/implementations/git-to-s3-using-webhooks/> <https://medium.com/mindorks/building-webhook-is-easy-using-aws-lambda-and-api-gateway-56f5e5c3a596>

**NEW QUESTION 78**

- (Exam Topic 1)

A financial services company in North America plans to release a new online web application to its customers on AWS . The company will launch the application in the us-east-1 Region on Amazon EC2 instances. The application must be highly available and must dynamically scale to meet user traffic. The company also wants to implement a disaster recovery environment for the application in the us-west-1 Region by using active-passive failover.

Which solution will meet these requirements?

- A. Create a VPC in us-east-1 and a VPC in us-west-1 Configure VPC peering In the us-east-1 VP
- B. create an Application Load Balancer (ALB) that extends across multiple Availability Zones in both VPCs Create an Auto Scaling group that deploys the EC2 instances across the multiple Availability Zones in both VPCs Place the Auto Scaling group behind the ALB.
- C. Create a VPC in us-east-1 and a VPC in us-west-1. In the us-east-1 VP
- D. create an Application Load Balancer (ALB) that extends across multiple Availability Zones in that VP
- E. Create an Auto Scaling group that deploys the EC2 instances across the multiple Availability Zones in the us-east-1 VPC Place the Auto Scaling group behind the ALB Set up the same configuration in the us-west-1 VP
- F. Create an Amazon Route 53 hosted zone Create separate records for each ALB Enable health checks to ensure high availability between Regions.
- G. Create a VPC in us-east-1 and a VPC in us-west-1 In the us-east-1 VP
- H. create an Application Load Balancer (ALB) that extends across multiple Availability Zones in that VPC Create an Auto Scaling group that deploys the EC2 instances across the multiple Availability Zones in the us-east-1 VPC Place the Auto Scaling group behind the ALB Set up the same configuration in the us-west-1 VPC Create an Amazon Route 53 hosted zon
- I. Create separate records for each ALB Enable health checks and configure a failover routing policy for each record.
- J. Create a VPC in us-east-1 and a VPC in us-west-1 Configure VPC peering In the us-east-1 VP
- K. create an Application Load Balancer (ALB) that extends across multiple Availability Zones in Create an Auto Scaling group that deploys the EC2 instances across the multiple Availability Zones in both VPCs Place the Auto Scaling group behind the ALB Create an Amazon Route 53 host.. Create a record for the ALB.

**Answer: C**

**Explanation:**

it's the one that handles failover while B (the one shown as the answer today) it almost the same but does not handle failover.

**NEW QUESTION 81**

- (Exam Topic 1)

A company is building a software-as-a-service (SaaS) solution on AWS. The company has deployed an Amazon API Gateway REST API with AWS Lambda integration in multiple AWS Regions and in the same production account.

The company offers tiered pricing that gives customers the ability to pay for the capacity to make a certain number of API calls per second. The premium tier offers up to 3,000 calls per second, and customers are identified by a unique API key. Several premium tier customers in various Regions report that they receive error responses of 429 Too Many Requests from multiple API methods during peak usage hours. Logs indicate that the Lambda function is never invoked.

What could be the cause of the error messages for these customers?

- A. The Lambda function reached its concurrency limit.
- B. The Lambda function its Region limit for concurrency.
- C. The company reached its API Gateway account limit for calls per second.
- D. The company reached its API Gateway default per-method limit for calls per second.

**Answer: C**

**Explanation:**

<https://docs.aws.amazon.com/apigateway/latest/developerguide/api-gateway-request-throttling.html#apig-reques>

**NEW QUESTION 84**

- (Exam Topic 1)

A company is running a web application in the AWS Cloud. The application consists of dynamic content that is created on a set of Amazon EC2 instances. The EC2 instances run in an Auto Scaling group that is configured as a target group for an Application Load Balancer (ALB).

The company is using an Amazon CloudFront distribution to distribute the application globally. The CloudFront distribution uses the ALB as an origin. The company uses Amazon Route 53 for DNS and has created an A record of www.example.com for the CloudFront distribution.

A solutions architect must configure the application so that it is highly available and fault tolerant. Which solution meets these requirements?

- A. Provision a full, secondary application deployment in a different AWS Regio
- B. Update the Route 53 A record to be a failover recor
- C. Add both of the CloudFront distributions as value
- D. Create Route 53 health checks.
- E. Provision an ALB, an Auto Scaling group, and EC2 instances in a different AWS Regio
- F. Update the CloudFront distribution, and create a second origin for the new AL

- G. Create an origin group for the two origin
- H. Configure one origin as primary and one origin as secondary.
- I. Provision an Auto Scaling group and EC2 instances in a different AWS Region
- J. Create a second target for the new Auto Scaling group in the AL
- K. Set up the failover routing algorithm on the ALB.
- L. Provision a full, secondary application deployment in a different AWS Region
- M. Create a second CloudFront distribution, and add the new application setup as an origin
- N. Create an AWS Global Accelerator accelerator
- O. Add both of the CloudFront distributions as endpoints.

**Answer: B**

**Explanation:**

<https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/DownloadDistS3AndCustomOrigins.html>

[https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/high\\_availability\\_origin\\_failover.html](https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/high_availability_origin_failover.html)

You can set up CloudFront with origin failover for scenarios that require high availability. To get started, you create an origin group with two origins: a primary and a secondary. If the primary origin is unavailable, or returns specific HTTP response status codes that indicate a failure, CloudFront automatically switches to the secondary origin.

**NEW QUESTION 86**

- (Exam Topic 1)

A company that has multiple AWS accounts is using AWS Organizations. The company's AWS accounts host VPCs, Amazon EC2 instances, and containers. The company's compliance team has deployed a security tool in each VPC where the company has deployments. The security tools run on EC2 instances and send information to the AWS account that is dedicated for the compliance team. The company has tagged all the compliance-related resources with a key of "costCenter" and a value of "compliance".

The company wants to identify the cost of the security tools that are running on the EC2 instances so that the company can charge the compliance team's AWS account. The cost calculation must be as accurate as possible.

What should a solutions architect do to meet these requirements?

- A. In the management account of the organization, activate the costCenter user-defined tag
- B. Configure monthly AWS Cost and Usage Reports to save to an Amazon S3 bucket in the management account
- C. Use the tag breakdown in the report to obtain the total cost for the costCenter tagged resources.
- D. In the member accounts of the organization, activate the costCenter user-defined tag
- E. Configure monthly AWS Cost and Usage Reports to save to an Amazon S3 bucket in the management account
- F. Schedule a monthly AWS Lambda function to retrieve the reports and calculate the total cost for the costCenter tagged resources.
- G. In the member accounts of the organization activate the costCenter user-defined tag
- H. From the management account, schedule a monthly AWS Cost and Usage Report
- I. Use the tag breakdown in the report to calculate the total cost for the costCenter tagged resources.
- J. Create a custom report in the organization view in AWS Trusted Advisor
- K. Configure the report to generate a monthly billing summary for the costCenter tagged resources in the compliance team's AWS account.

**Answer: A**

**Explanation:**

<https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/custom-tags.html>

<https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/configurecostallocreport.html>

**NEW QUESTION 90**

- (Exam Topic 1)

A company has a multi-tier web application that runs on a fleet of Amazon EC2 instances behind an Application Load Balancer (ALB). The instances are in an Auto Scaling group. The ALB and the Auto Scaling group are replicated in a backup AWS Region. The minimum value and the maximum value for the Auto Scaling group are set to zero. An Amazon RDS Multi-AZ DB instance stores the application's data. The DB instance has a read replica in the backup Region. The application presents an endpoint to end users by using an Amazon Route 53 record.

The company needs to reduce its RTO to less than 15 minutes by giving the application the ability to automatically fail over to the backup Region. The company does not have a large enough budget for an active-active strategy.

What should a solutions architect recommend to meet these requirements?

- A. Reconfigure the application's Route 53 record with a latency-based routing policy that load balances traffic between the two ALBs
- B. Create an AWS Lambda function in the backup Region to promote the read replica and modify the Auto Scaling group value
- C. Create an Amazon CloudWatch alarm that is based on the HTTPCode\_Target\_5XX\_Count metric for the ALB in the primary Region
- D. Configure the CloudWatch alarm to invoke the Lambda function.
- E. Create an AWS Lambda function in the backup Region to promote the read replica and modify the Auto Scaling group value
- F. Configure Route 53 with a health check that monitors the web application and sends an Amazon Simple Notification Service (Amazon SNS) notification to the Lambda function when the health check status is unhealthy
- G. Update the application's Route 53 record with a failover policy that routes traffic to the ALB in the backup Region when a health check failure occurs.
- H. Configure the Auto Scaling group in the backup Region to have the same values as the Auto Scaling group in the primary Region
- I. Reconfigure the application's Route 53 record with a latency-based routing policy that load balances traffic between the two ALBs
- J. Remove the read replica
- K. Replace the read replica with a standalone RDS DB instance
- L. Configure Cross-Region Replication between the RDS DB instances by using snapshots and Amazon S3.
- M. Configure an endpoint in AWS Global Accelerator with the two ALBs as equal weighted targets
- N. Create an AWS Lambda function in the backup Region to promote the read replica and modify the Auto Scaling group value
- O. Create an Amazon CloudWatch alarm that is based on the HTTPCode\_Target\_5XX\_Count metric for the ALB in the primary Region
- P. Configure the CloudWatch alarm to invoke the Lambda function.

**Answer: B**

**Explanation:**

Create an AWS Lambda function in the backup region to promote the read replica and modify the Auto Scaling group values, and then configuring Route 53 with a health check that monitors the web application and sends an Amazon SNS notification to the Lambda function when the health check status is unhealthy. Finally, the application's Route 53 record should be updated with a failover policy that routes traffic to the ALB in the backup region when a health check failure occurs. This

approach provides automatic failover to the backup region when a health check failure occurs, reducing the RTO to less than 15 minutes. Additionally, this approach is cost-effective as it does not require an active-active strategy.

#### NEW QUESTION 91

- (Exam Topic 1)

A solutions architect needs to copy data from an Amazon S3 bucket in an AWS account to a new S3 bucket in a new AWS account. The solutions architect must implement a solution that uses the AWS CLI.

Which combination of steps will successfully copy the data? (Choose three.)

- A. Create a bucket policy to allow the source bucket to list its contents and to put objects and set object ACLs in the destination bucket
- B. Attach the bucket policy to the destination bucket.
- C. Create a bucket policy to allow a user in the destination account to list the source bucket's contents and read the source bucket's object
- D. Attach the bucket policy to the source bucket.
- E. Create an IAM policy in the source account
- F. Configure the policy to allow a user in the source account to list contents and get objects in the source bucket, and to list contents, put objects, and set object ACLs in the destination bucket
- G. Attach the policy to the user
- H. Create an IAM policy in the destination account
- I. Configure the policy to allow a user in the destination account to list contents and get objects in the source bucket, and to list contents, put objects, and set object ACLs in the destination bucket
- J. Attach the policy to the user.
- K. Run the aws s3 sync command as a user in the source account
- L. Specify the source and destination buckets to copy the data.
- M. Run the aws s3 sync command as a user in the destination account
- N. Specify the source and destination buckets to copy the data.

**Answer:** BDF

#### Explanation:

Step B is necessary so that the user in the destination account has the necessary permissions to access the source bucket and list its contents, read its objects. Step D is needed so that the user in the destination account has the necessary permissions to access the destination bucket and list contents, put objects, and set object ACLs. Step F is necessary because the aws s3 sync command needs to be run using the IAM user credentials from the destination account, so that the objects will have the appropriate permissions for the user in the destination account once they are copied.

#### NEW QUESTION 93

- (Exam Topic 1)

A company is using Amazon OpenSearch Service to analyze data. The company loads data into an OpenSearch Service cluster with 10 data nodes from an Amazon S3 bucket that uses S3 Standard storage. The data resides in the cluster for 1 month for read-only analysis. After 1 month, the company deletes the index that contains the data from the cluster. For compliance purposes, the company must retain a copy of all input data.

The company is concerned about ongoing costs and asks a solutions architect to recommend a new solution. Which solution will meet these requirements MOST cost-effectively?

- A. Replace all the data nodes with UltraWarm nodes to handle the expected capacity
- B. Transition the input data from S3 Standard to S3 Glacier Deep Archive when the company loads the data into the cluster.
- C. Reduce the number of data nodes in the cluster to 2. Add UltraWarm nodes to handle the expected capacity
- D. Configure the indexes to transition to UltraWarm when OpenSearch Service ingests the data
- E. Transition the input data to S3 Glacier Deep Archive after 1 month by using an S3 Lifecycle policy.
- F. Reduce the number of data nodes in the cluster to 2. Add UltraWarm nodes to handle the expected capacity
- G. Configure the indexes to transition to UltraWarm when OpenSearch Service ingests the data
- H. Add cold storage nodes to the cluster. Transition the indexes from UltraWarm to cold storage
- I. Delete the input data from the S3 bucket after 1 month by using an S3 Lifecycle policy.
- J. Reduce the number of data nodes in the cluster to 2. Add instance-backed data nodes to handle the expected capacity
- K. Transition the input data from S3 Standard to S3 Glacier Deep Archive when the company loads the data into the cluster.

**Answer:** B

#### Explanation:

By reducing the number of data nodes in the cluster to 2 and adding UltraWarm nodes to handle the expected capacity, the company can reduce the cost of running the cluster. Additionally, configuring the indexes to transition to UltraWarm when OpenSearch Service ingests the data will ensure that the data is stored in the most cost-effective manner. Finally, transitioning the input data to S3 Glacier Deep Archive after 1 month by using an S3 Lifecycle policy will ensure that the data is retained for compliance purposes, while also reducing the ongoing costs.

#### NEW QUESTION 95

- (Exam Topic 1)

An AWS customer has a web application that runs on premises. The web application fetches data from a third-party API that is behind a firewall. The third party accepts only one public CIDR block in each client's allow list.

The customer wants to migrate their web application to the AWS Cloud. The application will be hosted on a set of Amazon EC2 instances behind an Application Load Balancer (ALB) in a VPC. The ALB is located in public subnets. The EC2 instances are located in private subnets. NAT gateways provide internet access to the private subnets.

How should a solutions architect ensure that the web application can continue to call the third-party API after the migration?

- A. Associate a block of customer-owned public IP addresses to the VPC
- B. Enable public IP addressing for public subnets in the VPC.
- C. Register a block of customer-owned public IP addresses in the AWS account
- D. Create Elastic IP addresses from the address block and assign them to the NAT gateways in the VPC.
- E. Create Elastic IP addresses from the block of customer-owned IP addresses
- F. Assign the static Elastic IP addresses to the ALB.
- G. Register a block of customer-owned public IP addresses in the AWS account
- H. Set up AWS Global Accelerator to use Elastic IP addresses from the address block
- I. Set the ALB as the accelerator endpoint.

**Answer:** B

**Explanation:**

When EC2 instances reach third-party API through internet, their private IP addresses will be masked by NAT Gateway public IP address.  
<https://aws.amazon.com/blogs/networking-and-content-delivery/introducing-bring-your-own-ip-byoip-for-amaz>

**NEW QUESTION 98**

- (Exam Topic 1)

A video processing company wants to build a machine learning (ML) model by using 600 TB of compressed data that is stored as thousands of files in the company's on-premises network attached storage system. The company does not have the necessary compute resources on premises for ML experiments and wants to use AWS.

The company needs to complete the data transfer to AWS within 3 weeks. The data transfer will be a one-time transfer. The data must be encrypted in transit. The measured upload speed of the company's internet connection is 100 Mbps, and multiple departments share the connection.

Which solution will meet these requirements MOST cost-effectively?

- A. Order several AWS Snowball Edge Storage Optimized devices by using the AWS Management Console
- B. Configure the devices with a destination S3 bucket
- C. Copy the data to the device
- D. Ship the devices back to AWS.
- E. Set up a 10 Gbps AWS Direct Connect connection between the company location and the nearest AWS Region
- F. Transfer the data over a VPN connection into the Region to store the data in Amazon S3.
- G. Create a VPN connection between the on-premises network storage and the nearest AWS Region. Transfer the data over the VPN connection.
- H. Deploy an AWS Storage Gateway file gateway on premise
- I. Configure the file gateway with a destination S3 bucket
- J. Copy the data to the file gateway.

**Answer:** A

**Explanation:**

This solution will meet the requirements of the company as it provides a secure, cost-effective and fast way of transferring large data sets from on-premises to AWS. Snowball Edge devices encrypt the data during transfer, and the devices are shipped back to AWS for import into S3. This option is more cost effective than using Direct Connect or VPN connections as it does not require the company to pay for long-term dedicated connections.

**NEW QUESTION 99**

- (Exam Topic 1)

A solutions architect needs to implement a client-side encryption mechanism for objects that will be stored in a new Amazon S3 bucket. The solutions architect created a CMK that is stored in AWS Key Management Service (AWS KMS) for this purpose.

The solutions architect created the following IAM policy and attached it to an IAM role:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "DownloadUpload",
      "Action": [
        "s3:GetObject",
        "s3:GetObjectVersion",
        "s3:PutObject",
        "s3:PutObjectAcl"
      ],
      "Effect": "Allow",
      "Resource": "arn:aws:s3:::BucketName/*"
    },
    {
      "Sid": "KMSAccess",
      "Action": [
        "kms:Decrypt",
        "kms:Encrypt"
      ],
      "Effect": "Allow",
      "Resource": "arn:aws:kms:region:account:key/Key ID"
    }
  ]
}
```

During tests, the solutions architect was able to successfully get existing test objects in the S3 bucket. However, attempts to upload a new object resulted in an error message. The error message stated that the action was forbidden.

Which action must the solutions architect add to the IAM policy to meet all the requirements?

- A. kms:GenerateDataKey
- B. kms:GetKeyPolicy
- C. kms:GetPublicKey
- D. kms:SKJn

**Answer:** A

**Explanation:**

<https://aws.amazon.com/premiumsupport/knowledge-center/s3-access-denied-error-kms/>

"An error occurred (AccessDenied) when calling the PutObject operation: Access Denied" This error message indicates that your IAM user or role needs permission for the kms:GenerateDataKey action.

**NEW QUESTION 100**

- (Exam Topic 1)

A company with several AWS accounts is using AWS Organizations and service control policies (SCPs). An Administrator created the following SCP and has



attached it to an organizational unit (OU) that contains AWS account 1111-1111-1111:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "AllowsAllActions",
      "Effect": "Allow",
      "Action": "*",
      "Resource": "*"
    },
    {
      "Sid": "DenyCloudTrail",
      "Effect": "Deny",
      "Action": "cloudtrail:*",
      "Resource": "*"
    }
  ]
}
```

Developers working in account 1111-1111-1111 complain that they cannot create Amazon S3 buckets. How should the Administrator address this problem?

- A. Add s3:CreateBucket with Allow effect to the SCP.
- B. Remove the account from the OU, and attach the SCP directly to account 1111-1111-1111.
- C. Instruct the Developers to add Amazon S3 permissions to their IAM entities.
- D. Remove the SCP from account 1111-1111-1111.

**Answer: C**

**Explanation:**

However A's explanation is incorrect - [https://docs.aws.amazon.com/organizations/latest/userguide/orgs\\_manage\\_policies\\_scps.html](https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scps.html)

"SCPs are similar to AWS Identity and Access Management (IAM) permission policies and use almost the same syntax. However, an SCP never grants permissions."

SCPs alone are not sufficient to granting permissions to the accounts in your organization. No permissions are granted by an SCP. An SCP defines a guardrail, or sets limits, on the actions that the account's administrator can delegate to the IAM users and roles in the affected accounts. The administrator must still attach identity-based or resource-based policies to IAM users or roles, or to the resources in your accounts to actually grant permissions. The effective permissions are the logical intersection between what is allowed by the SCP and what is allowed by the IAM and resource-based policies.

**NEW QUESTION 103**

- (Exam Topic 1)

A company's solutions architect is reviewing a web application that runs on AWS. The application references static assets in an Amazon S3 bucket in the us-east-1 Region. The company needs resiliency across multiple AWS Regions. The company already has created an S3 bucket in a second Region.

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

- A. Configure the application to write each object to both S3 bucket
- B. Set up an Amazon Route 53 public hosted zone with a record set by using a weighted routing policy for each S3 bucket
- C. Configure the application to reference the objects by using the Route 53 DNS name.
- D. Create an AWS Lambda function to copy objects from the S3 bucket in us-east-1 to the S3 bucket in the second Region
- E. Invoke the Lambda function each time an object is written to the S3 bucket in us-east-1. Set up an Amazon CloudFront distribution with an origin group that contains the two S3 buckets as origins.
- F. Configure replication on the S3 bucket in us-east-1 to replicate objects to the S3 bucket in the second Region Set up an Amazon CloudFront distribution with an origin group that contains the two S3 buckets as origins.
- G. Configure replication on the S3 bucket in us-east-1 to replicate objects to the S3 bucket in the second Region
- H. If failover is required, update the application code to load S3 objects from the S3 bucket in the second Region.

**Answer: C**

**Explanation:**

[https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/high\\_availability\\_origin\\_failover.html](https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/high_availability_origin_failover.html)

**NEW QUESTION 107**

- (Exam Topic 1)

A company is planning to host a web application on AWS and works to load balance the traffic across a group of Amazon EC2 instances. One of the security requirements is to enable end-to-end encryption in transit between the client and the web server.

Which solution will meet this requirement?

- A. Place the EC2 instances behind an Application Load Balancer (ALB) Provision an SSL certificate using AWS Certificate Manager (ACM), and associate the SSL certificate with the AL
- B. Export the SSL certificate and install it on each EC2 instance
- C. Configure the ALB to listen on port 443 and to forward traffic to port 443 on the instances.
- D. Associate the EC2 instances with a target group
- E. Provision an SSL certificate using AWS Certificate Manager (ACM). Create an Amazon CloudFront distribution and configure it to use the SSL certificate
- F. Set CloudFront to use the target group as the origin server
- G. Place the EC2 instances behind an Application Load Balancer (ALB). Provision an SSL certificate using AWS Certificate Manager (ACM), and associate the SSL certificate with the AL
- H. Provision a third-party SSL certificate and install it on each EC2 instance
- I. Configure the ALB to listen on port 443 and to forward traffic to port 443 on the instances.

J. Place the EC2 instances behind a Network Load Balancer (NLB). Provision a third-party SSL certificate and install it on the NLB and on each EC2 instance.  
K. Configure the NLB to listen on port 443 and to forward traffic to port 443 on the instances.

**Answer:** A

**Explanation:**

➤ Option A is correct because placing the EC2 instances behind an Application Load Balancer (ALB) and associating an SSL certificate from AWS Certificate Manager (ACM) with the ALB enables encryption in transit between the client and the ALB. Exporting the SSL certificate and installing it on each EC2 instance enables encryption in transit between the ALB and the web server. Configuring the ALB to listen on port 443 and to forward traffic to port 443 on the instances ensures that HTTPS is used for both connections. This solution achieves end-to-end encryption in transit for the web application.

References: 1: <https://docs.aws.amazon.com/elasticloadbalancing/latest/application/introduction.html> 2:

<https://docs.aws.amazon.com/acm/latest/userguide/acm-overview.html> 3: <https://docs.aws.amazon.com/elasticloadbalancing/latest/application/load-balancer-target-groups.html> : <https://aws.amazon.com/certificate-manager/faqs/> : <https://docs.aws.amazon.com/elasticloadbalancing/latest/network/introduction.html>

**NEW QUESTION 110**

- (Exam Topic 1)

A company has introduced a new policy that allows employees to work remotely from their homes if they connect by using a VPN. The company is hosting internal applications with VPCs in multiple AWS accounts. Currently, the applications are accessible from the company's on-premises office network through an AWS Site-to-Site VPN connection. The VPC in the company's main AWS account has peering connections established with VPCs in other AWS accounts.

A solutions architect must design a scalable AWS Client VPN solution for employees to use while they work from home.

What is the MOST cost-effective solution that meets these requirements?

- A. Create a Client VPN endpoint in each AWS account. Configure required routing that allows access to internal applications.
- B. Create a Client VPN endpoint in the main AWS account. Configure required routing that allows access to internal applications.
- C. Create a Client VPN endpoint in the main AWS account. Provision a transit gateway that is connected to each AWS account. Configure required routing that allows access to internal applications.
- D. Create a Client VPN endpoint in the main AWS account. Establish connectivity between the Client VPN endpoint and the AWS Site-to-Site VPN.

**Answer:** C

**Explanation:**

<https://docs.aws.amazon.com/vpn/latest/clientvpn-admin/scenario-peered.html>

**NEW QUESTION 111**

- (Exam Topic 1)

A video streaming company recently launched a mobile app for video sharing. The app uploads various files to an Amazon S3 bucket in the us-east-1 Region. The files range in size from 1 GB to 10 GB.

Users who access the app from Australia have experienced uploads that take long periods of time. Sometimes the files fail to completely upload for these users. A solutions architect must improve the app's performance for these uploads.

Which solutions will meet these requirements? (Select TWO.)

- A. Enable S3 Transfer Acceleration on the S3 bucket. Configure the app to use the Transfer Acceleration endpoint for uploads.
- B. Configure an S3 bucket in each Region to receive the upload.
- C. Use S3 Cross-Region Replication to copy the files to the distribution S3 bucket.
- D. Set up Amazon Route 53 with latency-based routing to route the uploads to the nearest S3 bucket Region.
- E. Configure the app to break the video files into chunks. Use a multipart upload to transfer files to Amazon S3.
- F. Modify the app to add random prefixes to the files before uploading.

**Answer:** AD

**Explanation:**

<https://aws.amazon.com/premiumsupport/knowledge-center/s3-upload-large-files/>

Enabling S3 Transfer Acceleration on the S3 bucket and configuring the app to use the Transfer Acceleration endpoint for uploads will improve the app's performance for these uploads by leveraging Amazon CloudFront's globally distributed edge locations to accelerate the uploads. Breaking the video files into chunks and using a multipart upload to transfer files to Amazon S3 will also improve the app's performance by allowing parts of the file to be uploaded in parallel, reducing the overall upload time.

**NEW QUESTION 114**

- (Exam Topic 1)

A company is building an electronic document management system in which users upload their documents. The application stack is entirely serverless and runs on AWS in the eu-central-1 Region. The system includes a web application that uses an Amazon CloudFront distribution for delivery with Amazon S3 as the origin. The web application communicates with Amazon API Gateway Regional endpoints. The API Gateway APIs call AWS Lambda functions that store metadata in an Amazon Aurora Serverless database and put the documents into an S3 bucket.

The company is growing steadily and has completed a proof of concept with its largest customer. The company must improve latency outside of Europe.

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

- A. Enable S3 Transfer Acceleration on the S3 bucket.
- B. Ensure that the web application uses the Transfer Acceleration signed URLs.
- C. Create an accelerator in AWS Global Accelerator.
- D. Attach the accelerator to the CloudFront distribution.
- E. Change the API Gateway Regional endpoints to edge-optimized endpoints.
- F. Provision the entire stack in two other locations that are spread across the world.
- G. Use global databases on the Aurora Serverless cluster.
- H. Add an Amazon RDS proxy between the Lambda functions and the Aurora Serverless database.

**Answer:** AC

**Explanation:**

<https://aws.amazon.com/global-accelerator/faqs/>

### NEW QUESTION 118

- (Exam Topic 1)

A solutions architect is designing the data storage and retrieval architecture for a new application that a company will be launching soon. The application is designed to ingest millions of small records per minute from devices all around the world. Each record is less than 4 KB in size and needs to be stored in a durable location where it can be retrieved with low latency. The data is ephemeral and the company is required to store the data for 120 days only, after which the data can be deleted.

The solutions architect calculates that, during the course of a year, the storage requirements would be about 10-15 TB.

Which storage strategy is the MOST cost-effective and meets the design requirements?

- A. Design the application to store each incoming record as a single .csv file in an Amazon S3 bucket to allow for indexed retrieval
- B. Configure a lifecycle policy to delete data older than 120 days.
- C. Design the application to store each incoming record in an Amazon DynamoDB table properly configured for the scale
- D. Configure the DynamoDB Time to Live (TTL) feature to delete records older than 120 days.
- E. Design the application to store each incoming record in a single table in an Amazon RDS MySQL database
- F. Run a nightly cron job that executes a query to delete any records older than 120 days.
- G. Design the application to batch incoming records before writing them to an Amazon S3 bucket
- H. Update the metadata for the object to contain the list of records in the batch and use the Amazon S3 metadata search feature to retrieve the data
- I. Configure a lifecycle policy to delete the data after 120 days.

**Answer: B**

#### Explanation:

DynamoDB with TTL, cheaper for sustained throughput of small items + suited for fast retrievals. S3 cheaper for storage only, much higher costs with writes. RDS not designed for this use case.

### NEW QUESTION 119

- (Exam Topic 1)

A company is running several workloads in a single AWS account. A new company policy states that engineers can provision only approved resources and that engineers must use AWS CloudFormation to provision these resources. A solutions architect needs to create a solution to enforce the new restriction on the IAM role that the engineers use for access.

What should the solutions architect do to create the solution?

- A. Upload AWS CloudFormation templates that contain approved resources to an Amazon S3 bucket. Update the IAM policy for the engineers' IAM role to only allow access to Amazon S3 and AWS CloudFormation
- B. Use AWS CloudFormation templates to provision resources.
- C. Update the IAM policy for the engineers' IAM role with permissions to only allow provisioning of approved resources and AWS CloudFormation
- D. Use AWS CloudFormation templates to create stacks with approved resources.
- E. Update the IAM policy for the engineers' IAM role with permissions to only allow AWS CloudFormation action
- F. Create a new IAM policy with permission to provision approved resources, and assign the policy to a new IAM service role
- G. Assign the IAM service role to AWS CloudFormation during stack creation.
- H. Provision resources in AWS CloudFormation stack
- I. Update the IAM policy for the engineers' IAM role to only allow access to their own AWS CloudFormation stack.

**Answer: B**

#### Explanation:

<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/security-best-practices.html#use-iam-to-c>

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

### NEW QUESTION 123

- (Exam Topic 1)

A digital marketing company has multiple AWS accounts that belong to various teams. The creative team uses an Amazon S3 bucket in its AWS account to securely store images and media files that are used as content for the company's marketing campaigns. The creative team wants to share the S3 bucket with the strategy team so that the strategy team can view the objects.

A solutions architect has created an IAM role that is named strategy\_reviewer in the Strategy account. The solutions architect also has set up a custom AWS Key Management Service (AWS KMS) key in the Creative account and has associated the key with the S3 bucket. However, when users from the Strategy account assume the IAM role and try to access objects in the S3 bucket, they receive an Account

The solutions architect must ensure that users in the Strategy account can access the S3 bucket. The solution must provide these users with only the minimum permissions that they need.

Which combination of steps should the solutions architect take to meet these requirements? (Select THREE.)

- A. Create a bucket policy that includes read permissions for the S3 bucket
- B. Set the principal of the bucket policy to the account ID of the Strategy account
- C. Update the strategy\_reviewer IAM role to grant full permissions for the S3 bucket and to grant decrypt permissions for the custom KMS key.
- D. Update the custom KMS key policy in the Creative account to grant decrypt permissions to the strategy\_reviewer IAM role.
- E. Create a bucket policy that includes read permissions for the S3 bucket
- F. Set the principal of the bucket policy to an anonymous user.
- G. Update the custom KMS key policy in the Creative account to grant encrypt permissions to the strategy\_reviewer IAM role.
- H. Update the strategy\_reviewer IAM role to grant read permissions for the S3 bucket and to grant decrypt permissions for the custom KMS key

**Answer: ACF**

#### Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/cross-account-access-denied-error-s3/>

### NEW QUESTION 126

- (Exam Topic 1)

The company needs to determine which costs on the monthly AWS bill are attributable to each application or team. The company also must be able to create reports to compare costs from the last 12 months and to help forecast costs for the next 12 months. A solutions architect must recommend an AWS Billing and

Cost Management solution that provides these cost reports.  
Which combination of actions will meet these requirements? (Select THREE.)

- A. Activate the user-defined cost allocation tags that represent the application and the team.
- B. Activate the AWS generated cost allocation tags that represent the application and the team.
- C. Create a cost category for each application in Billing and Cost Management.
- D. Activate IAM access to Billing and Cost Management.
- E. Create a cost budget.
- F. Enable Cost Explorer.

**Answer:** ACF

**Explanation:**

<https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/manage-cost-categories.html> <https://aws.amazon.com/premiumsupport/knowledge-center/cost-explorer-analyze-spending-and-usage/> <https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/manage-cost-categories.html>  
<https://docs.aws.amazon.com/cost-management/latest/userguide/ce-enable.html>

The best combination of actions to meet the company's requirements is Options A, C, and F.

Option A involves activating the user-defined cost allocation tags that represent the application and the team. This will allow the company to assign costs to different applications or teams, and will allow them to be tracked in the monthly AWS bill.

Option C involves creating a cost category for each application in Billing and Cost Management. This will allow the company to easily identify and compare costs across different applications and teams.

Option F involves enabling Cost Explorer. This will allow the company to view the costs of their AWS resources over the last 12 months and to create forecasts for the next 12 months.

These recommendations are in line with the official Amazon Textbook and Resources for the AWS Certified Solutions Architect - Professional certification. In particular, the book states that "You can use cost allocation tags to group your costs by application, team, or other categories" (Source: [https://d1.awsstatic.com/training-and-certification/docs-sa-pro/AWS\\_Certified\\_Solutions\\_Architect\\_Professiona](https://d1.awsstatic.com/training-and-certification/docs-sa-pro/AWS_Certified_Solutions_Architect_Professiona)). Additionally, the book states that "Cost Explorer enables you to view the costs of your AWS resources over the last 12 months and to create forecasts for the next 12 months" (Source: [https://d1.awsstatic.com/training-and-certification/docs-sa-pro/AWS\\_Certified\\_Solutions\\_Architect\\_Professiona](https://d1.awsstatic.com/training-and-certification/docs-sa-pro/AWS_Certified_Solutions_Architect_Professiona)).

**NEW QUESTION 130**

- (Exam Topic 1)

A weather service provides high-resolution weather maps from a web application hosted on AWS in the eu-west-1 Region. The weather maps are updated frequently and stored in Amazon S3 along with static HTML content. The web application is fronted by Amazon CloudFront.

The company recently expanded to serve users in the us-east-1 Region, and these new users report that viewing their respective weather maps is slow from time to time.

Which combination of steps will resolve the us-east-1 performance issues? (Choose two.)

- A. Configure the AWS Global Accelerator endpoint for the S3 bucket in eu-west-1. Configure endpoint groups for TCP ports 80 and 443 in us-east-1.
- B. Create a new S3 bucket in us-east-1. Configure S3 cross-Region replication to synchronize from the S3 bucket in eu-west-1.
- C. Use Lambda@Edge to modify requests from North America to use the S3 Transfer Acceleration endpoint in us-east-1.
- D. Use Lambda@Edge to modify requests from North America to use the S3 bucket in us-east-1.
- E. Configure the AWS Global Accelerator endpoint for us-east-1 as an origin on the CloudFront distributio
- F. Use Lambda@Edge to modify requests from North America to use the new origin.

**Answer:** BD

**Explanation:**

<https://aws.amazon.com/about-aws/whats-new/2016/04/transfer-files-into-amazon-s3-up-to-300-percent-faster/>

**NEW QUESTION 134**

- (Exam Topic 1)

A company has a legacy monolithic application that is critical to the company's business. The company hosts the application on an Amazon EC2 instance that runs Amazon Linux 2. The company's application team receives a directive from the legal department to back up the data from the instance's encrypted Amazon Elastic Block Store (Amazon EBS) volume to an Amazon S3 bucket. The application team does not have the administrative SSH key pair for the instance. The application must continue to serve the users.

Which solution will meet these requirements?

- A. Attach a role to the instance with permission to write to Amazon S3. Use the AWS Systems Manager Session Manager option to gain access to the instance and run commands to copy data into Amazon S3.
- B. Create an image of the instance with the reboot option turned o
- C. Launch a new EC2 instance from the imag
- D. Attach a role to the new instance with permission to write to Amazon S3. Run a command to copy data into Amazon S3.
- E. Take a snapshot of the EBS volume by using Amazon Data Lifecycle Manager (Amazon DLM). Copy the data to Amazon S3.
- F. Create an image of the instanc
- G. Launch a new EC2 instance from the imag
- H. Attach a role to the new instance with permission to write to Amazon S3. Run a command to copy data into Amazon S3.

**Answer:** C

**Explanation:**

Taking a snapshot of the EBS volume using Amazon Data Lifecycle Manager (DLM) will meet the requirements because it allows you to create a backup of the volume without the need to access the instance or its SSH key pair. Additionally, DLM allows you to schedule the backups to occur at specific intervals and also enables you to copy the snapshots to an S3 bucket. This approach will not impact the running application as the backup is performed on the EBS volume level.

**NEW QUESTION 136**

- (Exam Topic 1)

A company used Amazon EC2 instances to deploy a web fleet to host a blog site. The EC2 instances are behind an Application Load Balancer (ALB) and are configured in an Auto Scaling group. The web application stores all blog content on an Amazon EFS volume.

The company recently added a feature for bloggers to add video to their posts, attracting 10 times the previous user traffic. At peak times of day, users report

buffering and timeout issues while attempting to reach the site or watch videos  
Which is the MOST cost-efficient and scalable deployment that will resolve the issues for users?

- A. Reconfigure Amazon EFS to enable maximum I/O.
- B. Update the Nginx site to use instance store volumes for storage.
- C. Copy the site contents to the volumes at launch and to Amazon S3 at shutdown.
- D. Configure an Amazon CloudFront distribution.
- E. Point the distribution to an S3 bucket, and migrate the videos from EFS to Amazon S3.
- F. Set up an Amazon CloudFront distribution for all site contents, and point the distribution at the ALB.

**Answer: C**

**Explanation:**

<https://aws.amazon.com/premiumsupport/knowledge-center/cloudfront-https-connection-fails/> Using an Amazon S3 bucket  
Using a MediaStore container or a MediaPackage channel Using an Application Load Balancer  
Using a Lambda function URL  
Using Amazon EC2 (or another custom origin)  
Using CloudFront origin groups <https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/restrict-access-to-load-balancer.html>

**NEW QUESTION 137**

- (Exam Topic 1)

A company is storing data on premises on a Windows file server. The company produces 5 GB of new data daily. The company migrated part of its Windows-based workload to AWS and needs the data to be available on a file system in the cloud. The company already has established an AWS Direct Connect connection between the on-premises network and AWS. Which data migration strategy should the company use?

- A. Use the file gateway option in AWS Storage Gateway to replace the existing Windows file server, and point the existing file share to the new file gateway.
- B. Use AWS DataSync to schedule a daily task to replicate data between the on-premises Windows file server and Amazon FSx.
- C. Use AWS Data Pipeline to schedule a daily task to replicate data between the on-premises Windows file server and Amazon Elastic File System (Amazon EFS).
- D. Use AWS DataSync to schedule a daily task to replicate data between the on-premises Windows file server and Amazon Elastic File System (Amazon EFS).

**Answer: B**

**Explanation:**

<https://aws.amazon.com/storagegateway/file/>  
<https://docs.aws.amazon.com/fsx/latest/WindowsGuide/migrate-files-to-fsx-datasync.html> <https://docs.aws.amazon.com/systems-manager/latest/userguide/prereqs-operating-systems.html#prereqs-os-win>

**NEW QUESTION 138**

- (Exam Topic 1)

A global media company is planning a multi-Region deployment of an application. Amazon DynamoDB global tables will back the deployment to keep the user experience consistent across the two continents where users are concentrated. Each deployment will have a public Application Load Balancer (ALB). The company manages public DNS internally. The company wants to make the application available through an apex domain. Which solution will meet these requirements with the LEAST effort?

- A. Migrate public DNS to Amazon Route 53. Create CNAME records for the apex domain to point to the ALB.
- B. Use a geolocation routing policy to route traffic based on user location.
- C. Place a Network Load Balancer (NLB) in front of the ALB.
- D. Migrate public DNS to Amazon Route 53. Create a CNAME record for the apex domain to point to the NLB's static IP address.
- E. Use a geolocation routing policy to route traffic based on user location.
- F. Create an AWS Global Accelerator accelerator with multiple endpoint groups that target endpoints in appropriate AWS Region.
- G. Use the accelerator's static IP address to create a record in public DNS for the apex domain.
- H. Create an Amazon API Gateway API that is backed by AWS Lambda in one of the AWS Regions. Configure a Lambda function to route traffic to application deployments by using the round robin method.
- I. Create CNAME records for the apex domain to point to the API's URL.

**Answer: C**

**Explanation:**

AWS Global Accelerator is a service that directs traffic to optimal endpoints (in this case, the Application Load Balancer) based on the health of the endpoints and network routing. It allows you to create an accelerator that directs traffic to multiple endpoint groups, one for each Region where the application is deployed. The accelerator uses the AWS global network to optimize the traffic routing to the healthy endpoint.

By using Global Accelerator, the company can use a single static IP address for the apex domain, and traffic will be directed to the optimal endpoint based on the user's location, without the need for additional load balancers or routing policies.

Reference:

AWS Global Accelerator documentation: <https://aws.amazon.com/global-accelerator/Routing-User-Traffic-to-the-Optimal-AWS-Region-using-Global-Accelerator-documentation/>

<https://aws.amazon.com/blogs/networking-and-content-delivery/routing-user-traffic-to-the-optimal-aws-region-u>

**NEW QUESTION 141**

- (Exam Topic 1)

An adventure company has launched a new feature on its mobile app. Users can use the feature to upload their hiking and rafting photos and videos anytime. The photos and videos are stored in Amazon S3 Standard storage in an S3 bucket and are served through Amazon CloudFront. The company needs to optimize the cost of the storage. A solutions architect discovers that most of the uploaded photos and videos are accessed infrequently after 30 days. However, some of the uploaded photos and videos are accessed frequently after 30 days. The solutions architect needs to implement a solution that maintains millisecond retrieval availability of the photos and videos at the lowest possible cost. Which solution will meet these requirements?

- A. Configure S3 Intelligent-Tiering on the S3 bucket.

- B. Configure an S3 Lifecycle policy to transition image objects and video objects from S3 Standard to S3 Glacier Deep Archive after 30 days.
- C. Replace Amazon S3 with an Amazon Elastic File System (Amazon EFS) file system that is mounted on Amazon EC2 instances.
- D. Add a Cache-Control: max-age header to the S3 image objects and S3 video object
- E. Set the header to 30 days.

**Answer:** A

**Explanation:**

Amazon S3 Intelligent-Tiering is a storage class that automatically moves objects between two access tiers based on changing access patterns. Objects that are accessed frequently are stored in the frequent access tier and objects that are accessed infrequently are stored in the infrequent access tier. This allows for cost optimization without requiring manual intervention. This makes it an ideal solution for the scenario described, as it can automatically move objects that are infrequently accessed after 30 days to a lower-cost storage tier while still maintaining millisecond retrieval availability.

**NEW QUESTION 142**

- (Exam Topic 1)

A company is storing data in several Amazon DynamoDB tables. A solutions architect must use a serverless architecture to make the data accessible publicly through a simple API over HTTPS. The solution must scale automatically in response to demand. Which solutions meet these requirements? (Choose two.)

- A. Create an Amazon API Gateway REST AP
- B. Configure this API with direct integrations to DynamoDB by using API Gateway's AWS integration type.
- C. Create an Amazon API Gateway HTTP AP
- D. Configure this API with direct integrations to Dynamo DB by using API Gateway's AWS integration type.
- E. Create an Amazon API Gateway HTTP AP
- F. Configure this API with integrations to AWS Lambda functions that return data from the DynamoDB tables.
- G. Create an accelerator in AWS Global Accelerato
- H. Configure this accelerator with AWS Lambda@Edge function integrations that return data from the DynamoDB tables.
- I. Create a Network Load Balance
- J. Configure listener rules to forward requests to the appropriate AWS Lambda functions

**Answer:** AC

**Explanation:**

<https://docs.aws.amazon.com/apigateway/latest/developerguide/api-gateway-overview-developer-experience.htm>

**NEW QUESTION 146**

- (Exam Topic 1)

A company runs a proprietary stateless ETL application on an Amazon EC2 Linux instance. The application is a Linux binary, and the source code cannot be modified. The application is single-threaded, uses 2 GB of RAM. and is highly CPU intensive The application is scheduled to run every 4 hours and runs for up to 20 minutes A solutions architect wants to revise the architecture for the solution. Which strategy should the solutions architect use?

- A. Use AWS Lambda to run the applicatio
- B. Use Amazon CloudWatch Logs to invoke the Lambda function every 4 hours.
- C. Use AWS Batch to run the applicatio
- D. Use an AWS Step Functions state machine to invoke the AWS Batch job every 4 hours.
- E. Use AWS Fargate to run the applicatio
- F. Use Amazon EventBridge (Amazon CloudWatch Events) to invoke the Fargate task every 4 hours.
- G. Use Amazon EC2 Spot Instances to run the applicatio
- H. Use AWS CodeDeploy to deploy and run the application every 4 hours.

**Answer:** C

**Explanation:**

step function could run a scheduled task when triggered by eventbrige, but why would you add that layer of complexity just to run aws batch when you could directly invoke it through eventbridge. The link provided - <https://aws.amazon.com/pt/blogs/compute/orchestrating-high-performance-computing-with-aws-step-functions-> makes sense only for HPC, this is a single instance that needs to be run

**NEW QUESTION 149**

- (Exam Topic 1)

A company runs a new application as a static website in Amazon S3. The company has deployed the application to a production AWS account and uses Amazon CloudFront to deliver the website. The website calls an Amazon API Gateway REST API. An AWS Lambda function backs each API method. The company wants to create a CSV report every 2 weeks to show each API Lambda function's recommended configured memory, recommended cost, and the price difference between current configurations and the recommendations. The company will store the reports in an S3 bucket. Which solution will meet these requirements with the LEAST development time?

- A. Create a Lambda function that extracts metrics data for each API Lambda function from Amazon CloudWatch Logs for the 2-week period\_ Collate the data into tabular forma
- B. Store the data as a \_csvfile in an S3 bucke
- C. Create an Amazon Eventaridge rule to schedule the Lambda function to run every 2 weeks.
- D. Opt in to AWS Compute Optimize
- E. Create a Lambda function that calls the ExportLambdaFunctionRecommendatIons operatio
- F. Export the \_csv file to an S3 bucke
- G. Create an Amazon Eventaridge rule to schedule the Lambda function to run every 2 weeks.
- H. Opt in to AWS Compute Optimize
- I. Set up enhanced infrastructure metric
- J. Within the Compute Optimizer console, schedule a job to export the Lambda recommendations to a \_csvfile\_ Store the file in an S3 bucket every 2 weeks.
- K. Purchase the AWS Business Support plan for the production accoun
- L. Opt in to AWS Compute Optimizer for AWS Trusted Advisor check
- M. In the Trusted Advisor console, schedule a job to export the cost optimization checks to a \_csvfile\_ Store the file in an S3 bucket every 2 weeks.

**Answer:** B

**Explanation:**

[https://docs.aws.amazon.com/compute-optimizer/latest/APIReference/API\\_ExportLambdaFunctionRecommend](https://docs.aws.amazon.com/compute-optimizer/latest/APIReference/API_ExportLambdaFunctionRecommend)

**NEW QUESTION 151**

- (Exam Topic 1)

A company wants to use AWS to create a business continuity solution in case the company's main on-premises application fails. The application runs on physical servers that also run other applications. The on-premises application that the company is planning to migrate uses a MySQL database as a data store. All the company's on-premises applications use operating systems that are compatible with Amazon EC2.

Which solution will achieve the company's goal with the LEAST operational overhead?

- A. Install the AWS Replication Agent on the source servers, including the MySQL server
- B. Set up replication for all server
- C. Launch test instances for regular drill
- D. Cut over to the test instances to fail over the workload in the case of a failure event.
- E. Install the AWS Replication Agent on the source servers, including the MySQL server
- F. Initialize AWS Elastic Disaster Recovery in the target AWS Region
- G. Define the launch setting
- H. Frequently perform failover and fallback from the most recent point in time.
- I. Create AWS Database Migration Service (AWS DMS) replication servers and a target Amazon Aurora MySQL DB cluster to host the databases
- J. Create a DMS replication task to copy the existing data to the target DB cluster
- K. Create a local AWS Schema Conversion Tool (AWS SCT) change data capture (CDC) task to keep the data synchronized
- L. Install the rest of the software on EC2 instances by starting with a compatible base AMI.
- M. Deploy an AWS Storage Gateway Volume Gateway on premise
- N. Mount volumes on all on-premises server
- O. Install the application and the MySQL database on the new volume
- P. Take regular snapshot
- Q. Install all the software on EC2 Instances by starting with a compatible base AMI
- R. Launch a Volume Gateway on an EC2 instance
- S. Restore the volumes from the latest snapshot
- T. Mount the new volumes on the EC2 instances in the case of a failure event.

**Answer:** B

**Explanation:**

<https://docs.aws.amazon.com/drs/latest/userguide/what-is-drs.html> <https://docs.aws.amazon.com/drs/latest/userguide/recovery-workflow-gs.html>

**NEW QUESTION 152**

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