

## Exam Questions SAP-C01

AWS Certified Solutions Architect- Professional

<https://www.2passeasy.com/dumps/SAP-C01/>



**NEW QUESTION 1**

A company has an Amazon EC2 deployment that has the following architecture:

- An application tier that contains 8 m4.xlarge instances
- A Classic Load Balancer
- Amazon S3 as a persistent data store

After one of the EC2 instances fails, users report very slow processing of their requests. A Solutions Architect must recommend design changes to maximize system reliability. The solution must minimize costs.

What should the Solution Architect recommend?

- A. Migrate the existing EC2 instances to a serverless deployment using AWS Lambda functions
- B. Change the Classic Load Balancer to an Application Load Balancer
- C. Replace the application tier with m4.large instances in an Auto Scaling group
- D. Replace the application tier with 4 m4.2xlarge instances

**Answer: B**

**Explanation:**

By default, connection draining is enabled for Application Load Balancers but must be enabled for Classic Load Balancers. When Connection Draining is enabled and configured, the process of deregistering an instance from an Elastic Load Balancer gains an additional step. For the duration of the configured timeout, the load balancer will allow existing, in-flight requests made to an instance to complete, but it will not send any new requests to the instance. During this time, the API will report the status of the instance as InService, along with a message stating that "Instance deregistration currently in progress." Once the timeout is reached, any remaining connections will be forcibly closed. <https://docs.aws.amazon.com/autoscaling/ec2/userguide/attach-load-balancer-asg.html>  
<https://aws.amazon.com/blogs/aws/elb-connection-draining-remove-instances-from-service-with-care/>

**NEW QUESTION 2**

A company wants to follow its website on AWS using serverless architecture design patterns for global customers. The company has outlined its requirements as follow:

- The website should be responsive.
- The website should offer minimal latency.
- The website should be highly available.
- Users should be able to authenticate through social identity providers such as Google, Facebook, and Amazon.
- There should be baseline DDoS protections for spikes in traffic.

How can the design requirements be met?

- A. Use Amazon CloudFront with Amazon ECS for hosting the website
- B. Use AWS Secrets Manager for provide user management and authentication function
- C. Use ECS Docker containers to build an API.
- D. Use Amazon Route 53 latency routing with an Application Load Balancer and AWS Fargate in different regions for hosting the website
- E. use Amazon Cognito to provide user management and authentication function
- F. Use Amazon EKS containers.
- G. Use Amazon CloudFront with Amazon S3 for hosting static web resource
- H. Use Amazon Cognito to provide user management authentication function
- I. Use Amazon API Gateway with AWS Lambda to build an API.
- J. Use AWS Direct Connect with Amazon CloudFront and Amazon S3 for hosting static web resource. Use Amazon Cognito to provide user management authentication function
- K. Use AWS Lambda to build an API.

**Answer: C**

**NEW QUESTION 3**

A company is designing a new highly available web application on AWS. The application requires consistent and reliable connectivity from the application servers in AWS to a backend REST API hosted in the company's on-premises environment. The backend connection between AWS and on-premises will be routed over an AWS Direct Connect connection through a private virtual interface. Amazon Route 53 will be used to manage private DNS records for the application to resolve the IP address on the backend REST API.

Which design would provide a reliable connection to the backend API?

- A. Implement at least two backend endpoints for the backend REST API, and use Route 53 health checks to monitor the availability of each backend endpoint and perform DNS-level failover.
- B. Install a second Direct Connect connection from a different network carrier and attach it to the same virtual private gateway as the first Direct Connect connection.
- C. Install a second cross connect for the same Direct Connect connection from the same network carrier, and join both connections to the same link aggregation group (LAG) on the same private virtual interface.
- D. Create an IPSec VPN connection routed over the public internet from the on-premises data center to AWS and attach it to the same virtual private gateway as the Direct Connect connection.

**Answer: A**

**NEW QUESTION 4**

A company currently uses Amazon EBS and Amazon RDS for storage purposes. The company intends to use a pilot light approach for disaster recovery in a different AWS Region. The company has an RTO of 6 hours and an RPO of 24 hours.

Which solution would achieve the requirements with MINIMAL cost?

- A. Use AWS Lambda to create daily EBS and RDS snapshots, and copy them to the disaster recovery region

- B. Use Amazon Route 53 with active-passive failover configuratio
- C. Use Amazon EC2 in an Auto Scaling group with the capacity set to 0 in the disaster recovery region.
- D. Use AWS Lambda to create daily EBS and RDS snapshots, and copy them to the disaster recovery regio
- E. Use Amazon Route 53 with active-active failover configuratio
- F. Use Amazon EC2 in an AutoScaling group configured in the same way as in the primary region.
- G. Use Amazon ECS to handle long-running tasks to create daily EBS and RDS snapshots, and copy to the disaster recovery regio
- H. Use Amazon Route 53 with active-passive failover configuratio
- I. Use Amazon EC2 in an Auto Scaling group with the capacity set to 0 in the disaster recovery region.
- J. Use EBS and RDS cross-region snapshot copy capability to create snapshots in the disaster recovery regio
- K. Use Amazon Route 53 with active-active failover configuratio
- L. Use Amazon EC2 in an Auto Scaling group with the capacity set to 0 in the disaster recovery region.

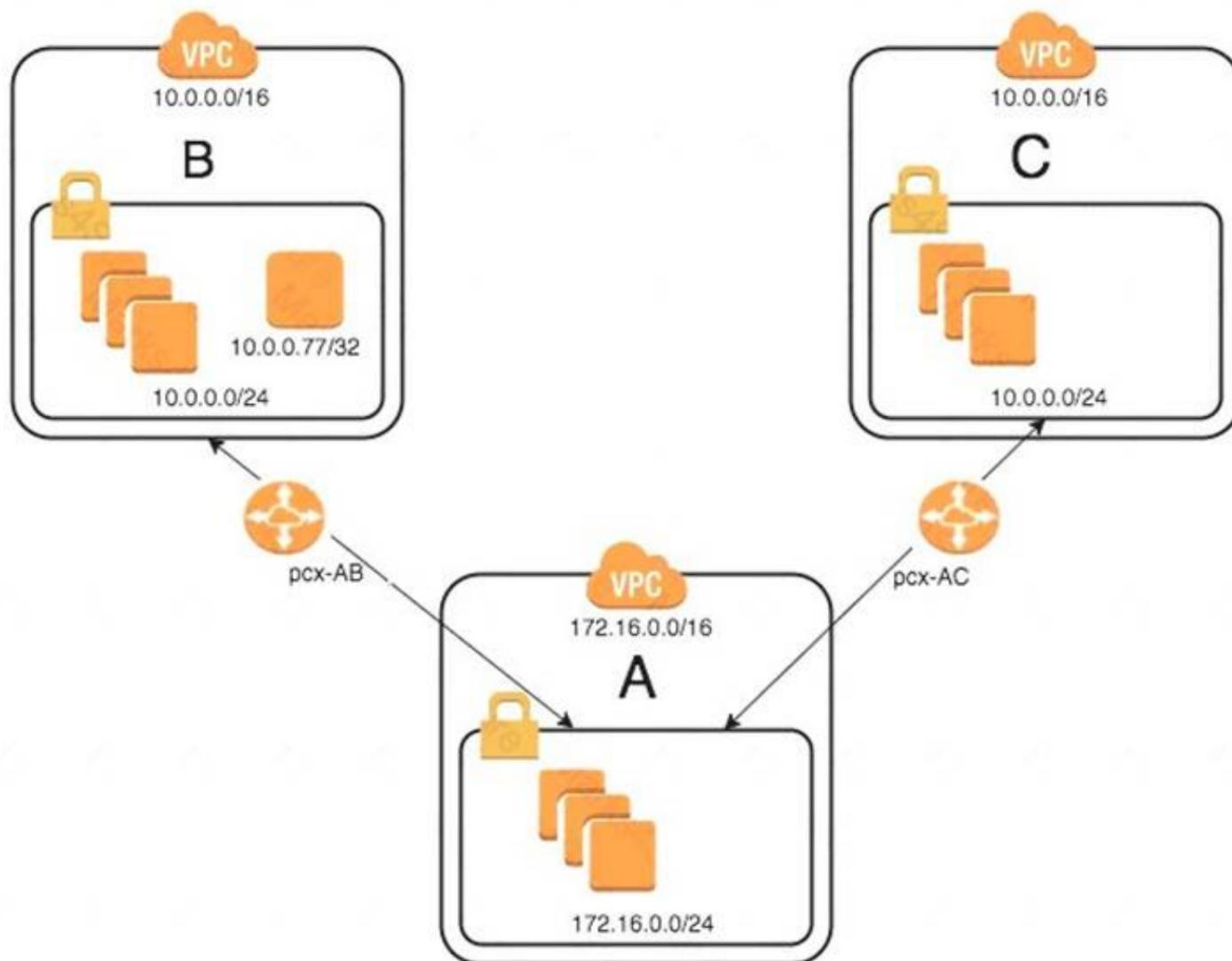
Answer: A

**Explanation:**

[https://docs.aws.amazon.com/AmazonECS/latest/developerguide/scheduling\\_tasks.html](https://docs.aws.amazon.com/AmazonECS/latest/developerguide/scheduling_tasks.html)

**NEW QUESTION 5**

An organization has recently grown through acquisitions. Two of the purchased companies use the same IP CIDR range. There is a new short-term requirement to allow AnyCompany A (VPC-A) to communicate with a server that has the IP address 10.0.0.77 in AnyCompany B (VPC-B). AnyCompany A must also communicate with all resources in AnyCompany C (VPC-C). The Network team has created the VPC peer links, but it is having issues with communications between VPC-A and VPC-B. After an investigation, the team believes that the routing tables in the VPCs are incorrect.



What configuration will allow AnyCompany A to communicate with AnyCompany C in addition to the database in AnyCompany B?

- A. On VPC-A, create a static route for the VPC-B CIDR range (10.0.0.0/24) across VPC peer pcx-AB. Create a static route of 10.0.0.0/16 across VPC peer pcx-AC. On VPC-B, create a static route for VPC-A CIDR (172.16.0.0/24) on peer pcx-AB. On VPC-C, create a static route for VPC-A CIDR (172.16.0.0/24) across peer pcx-AC.
- B. On VPC-A, enable dynamic route propagation on pcx-AB and pcx-AC. On VPC-B, enable dynamic route propagation and use security groups to allow only the IP address 10.0.0.77/32 on VPC peer pcx-AB. On VPC-C, enable dynamic route propagation with VPC-A on peer pcx-AC.
- C. On VPC-A, create network access control lists that block the IP address 10.0.0.77/32 on VPC peer pcx-AC. On VPC-A, create a static route for VPC-B CIDR (10.0.0.0/24) on pcx-AB and a static route for VPC-C CIDR (10.0.0.0/24) on pcx-AC. On VPC-B, create a static route for VPC-A CIDR (172.16.0.0/24) across peer pcx-AB. On VPC-C, create a static route for VPC-A CIDR (172.16.0.0/24) across peer pcx-AC.
- D. On VPC-A, create a static route for the VPC-B CIDR (10.0.0.77/32) database across VPC peer pcx-AB. Create a static route for the VPC-C CIDR on VPC peer pcx-AC. On VPC-B, create a static route for VPC-A CIDR (172.16.0.0/24) on peer pcx-AB. On VPC-C, create a static route for VPC-A CIDR (172.16.0.0/24) across peer pcx-AC.

Answer: D

**NEW QUESTION 6**

A photo-sharing and publishing company receives 10,000 to 150,000 images daily. The company receives the images from multiple suppliers and users registered with the service. The company is moving to AWS and wants to enrich the existing metadata by adding data using Amazon Rekognition. The following is an example of the additional data:

```
list celebrities [name of the personality] wearing [color] looking [happy, sad] near [location example Eiffel Tower in Paris]
```

As part of the cloud migration program, the company uploaded existing image data to Amazon S3 and told users to upload images directly to Amazon S3. What should the Solutions Architect do to support these requirements?

- A. Trigger AWS Lambda based on an S3 event notification to create additional metadata using Amazon Rekognition
- B. Use Amazon DynamoDB to store the metadata and Amazon ES to create an index
- C. Use a web front-end to provide search capabilities backed by Amazon ES.
- D. Use Amazon Kinesis to stream data based on an S3 event
- E. Use an application running in Amazon EC2 to extract metadata from the image
- F. Then store the data on Amazon DynamoDB and Amazon CloudSearch and create an index
- G. Use a web front-end with search capabilities backed by CloudSearch.
- H. Start an Amazon SQS queue based on S3 event notification
- I. Then have Amazon SQS send the metadata information to Amazon DynamoDB
- J. An application running on Amazon EC2 extracts data from Amazon Rekognition using the API and adds data to DynamoDB and Amazon ES
- K. Use a web front-end to provide search capabilities backed by Amazon ES.
- L. Trigger AWS Lambda based on an S3 event notification to create additional metadata using Amazon Rekognition
- M. Use Amazon RDS MySQL Multi-AZ to store the metadata information and use Lambda to create an index
- N. Use a web front-end with search capabilities backed by Lambda.

**Answer:** A

**Explanation:**

<https://github.com/aws-samples/lambda-refarch-imagerecognition>

**NEW QUESTION 7**

A company has a requirement that only allows specially hardened AMIs to be launched into public subnets in a VPC, and for the AMIs to be associated with a specific security group. Allowing non-compliant instances to launch into the public subnet could present a significant security risk if they are allowed to operate. A mapping of approved AMIs to subnets to security groups exists in an Amazon DynamoDB table in the same AWS account. The company created an AWS Lambda function that, when invoked, will terminate a given Amazon EC2 instance if the combination of AMI, subnet, and security group are not approved in the DynamoDB table.

What should the Solutions Architect do to MOST quickly mitigate the risk of compliance deviations?

- A. Create an Amazon CloudWatch Events rule that matches each time an EC2 instance is launched using one of the allowed AMIs, and associate it with the Lambda function as the target.
- B. For the Amazon S3 bucket receiving the AWS CloudTrail logs, create an S3 event notification configuration with a filter to match when logs contain the ec2:RunInstances action, and associate it with the Lambda function as the target.
- C. Enable AWS CloudTrail and configure it to stream to an Amazon CloudWatch Logs group
- D. Create a metric filter in CloudWatch to match when the ec2:RunInstances action occurs, and trigger the Lambda function when the metric is greater than 0.
- E. Create an Amazon CloudWatch Events rule that matches each time an EC2 instance is launched, and associate it with the Lambda function as the target.

**Answer:** C

**Explanation:**

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-instance-lifecycle.html>

**NEW QUESTION 8**

A company has a serverless application comprised of Amazon CloudFront, Amazon API Gateway, and AWS Lambda functions. The current deployment process of the application code is to create a new version number of the Lambda function and run an AWS CLI script to update. If the new function version has errors, another CLI script reverts by deploying the previous working version of the function. The company would like to decrease the time to deploy new versions of the application logic provided by the Lambda functions, and also reduce the time to detect and revert when errors are identified.

How can this be accomplished?

- A. Create and deploy nested AWS CloudFormation stacks with the parent stack consisting of the AWS CloudFront distribution and API Gateway, and the child stack containing the Lambda function
- B. For changes to Lambda, create an AWS CloudFormation change set and deploy; if errors are triggered, revert the AWS CloudFormation change set to the previous version.
- C. Use AWS SAM and built-in AWS CodeDeploy to deploy the new Lambda version, gradually shift traffic to the new version, and use pre-traffic and post-traffic test functions to verify code
- D. Rollback if Amazon CloudWatch alarms are triggered.
- E. Refactor the AWS CLI scripts into a single script that deploys the new Lambda version
- F. When deployment is completed, the script tests execution
- G. If errors are detected, revert to the previous Lambda version.
- H. Create and deploy an AWS CloudFormation stack that consists of a new API Gateway endpoint that references the new Lambda version
- I. Change the CloudFront origin to the new API Gateway endpoint, monitor errors and if detected, change the AWS CloudFront origin to the previous API Gateway endpoint.

**Answer:** B

**Explanation:**

<https://aws.amazon.com/about-aws/whats-new/2017/11/aws-lambda-supports-traffic-shifting-and-phased-deploy> <https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/automating-updates-to-serverless>

**NEW QUESTION 9**

A company runs an application on a fleet of Amazon EC2 instances. The application requires low latency and random access to 100 GB of data. The application must be able to access the data at up to 3,000 IOPS. A Development team has configured the EC2 launch template to provision a 100-GB Provisioned IOPS (PIOPS) Amazon EBS volume with 3,000 IOPS provisioned. A Solutions Architect is tasked with lowering costs without impacting performance and durability. Which action should be taken?

- A. Create an Amazon EFS file system with the performance mode set to Max I/O. Configure the EC2 operating system to mount the EFS file system
- B. Create an Amazon EFS file system with the throughput mode set to Provisioned. Configure the EC2 operating system to mount the EFS file system
- C. Update the EC2 launch template to allocate a new 1-TB EBS General Purpose SSD (gp2) volume
- D. Update the EC2 launch template to exclude the PIOPS volume. Configure the application to use local instance storage

**Answer:** A

#### NEW QUESTION 10

As a part of building large applications in the AWS Cloud, the Solutions Architect is required to implement the perimeter security protection. Applications running on AWS have the following endpoints:

- Application Load Balancer
- Amazon API Gateway regional endpoint
- Elastic IP address-based EC2 instances.
- Amazon S3 hosted websites.
- Classic Load Balancer

The Solutions Architect must design a solution to protect all of the listed web front ends and provide the following security capabilities:

- DDoS protection
- SQL injection protection
- IP address whitelist/blacklist
- HTTP flood protection
- Bad bot scraper protection

How should the Solutions Architect design the solution?

- A. Deploy AWS WAF and AWS Shield Advanced on all web endpoint
- B. Add AWS WAF rules to enforce the company's requirements.
- C. Deploy Amazon CloudFront in front of all the endpoint
- D. The CloudFront distribution provides perimeter protection
- E. Add AWS Lambda-based automation to provide additional security.
- F. Deploy Amazon CloudFront in front of all the endpoint
- G. Deploy AWS WAF and AWS Shield Advance
- H. Add AWS WAF rules to enforce the company's requirement
- I. Use AWS Lambda to automate and enhance the security posture.
- J. Secure the endpoints by using network ACLs and security groups and adding rules to enforce the company's requirement
- K. Use AWS Lambda to automatically update the rules.

**Answer: C**

#### NEW QUESTION 10

A company is migrating its marketing website and content management system from an on-premises data center to AWS. The company wants the AWS application to be developed in a VPC with Amazon EC2 instances used for the web servers and an Amazon RDS instance for the database.

The company has a runbook document that describes the installation process of the on-premises system. The company would like to base the AWS system on the processes referenced in the runbook document. The runbook document describes the installation and configuration of the operating systems, network settings, the website, and content management system software on the servers. After the migration is complete, the company wants to be able to make changes quickly to take advantage of other AWS features.

How can the application and environment be deployed and automated in AWS, while allowing for future changes?

- A. Update the runbook to describe how to create the VPC, the EC2 instances, and the RDS instance for the application by using the AWS Console
- B. Make sure that the rest of the steps in the runbook are updated to reflect any changes that may come from the AWS migration.
- C. Write a Python script that uses the AWS API to create the VPC, the EC2 instances, and the RDS instance for the application
- D. Write shell scripts that implement the rest of the steps in the runbook
- E. Have the Python script copy and run the shell scripts on the newly created instances to complete the installation.
- F. Write an AWS CloudFormation template that creates the VPC, the EC2 instances, and the RDS instance for the application
- G. Ensure that the rest of the steps in the runbook are updated to reflect any changes that may come from the AWS migration.
- H. Write an AWS CloudFormation template that creates the VPC, the EC2 instances, and the RDS instance for the application
- I. Include EC2 user data in the AWS CloudFormation template to install and configure the software.

**Answer: D**

#### NEW QUESTION 15

A company has a 24 TB MySQL database in its on-premises data center that grows at the rate of 10 GB per day. The data center is connected to the company's AWS infrastructure with a 50 Mbps VPN connection.

The company is migrating the application and workload to AWS. The application code is already installed and tested on Amazon EC2. The company now needs to migrate the database and wants to go live on AWS within 3 weeks.

Which of the following approaches meets the schedule with LEAST downtime?

- A. 1. Use the VM Import/Export service to import a snapshot on the on-premises database into AWS. 2. Launch a new EC2 instance from the snapshot. 3. Set up ongoing database replication from on premises to the EC2 database over the VPN. 4. Change the DNS entry to point to the EC2 database. 5. Stop the replication.
- B. 1. Launch an AWS DMS instance. 2. Launch an Amazon RDS Aurora MySQL DB instance. 3. Configure the AWS DMS instance with on-premises and Amazon RDS database information. 4. Start the replication task within AWS DMS over the VPN. 5. Change the DNS entry to point to the Amazon RDS MySQL database. 6. Stop the replication.
- C. 1. Create a database export locally using database-native tools. 2. Import that into AWS using AWS Snowball. 3. Launch an Amazon RDS Aurora DB instance. 4. Load the data in the RDS Aurora DB instance from the export. 5. Set up database replication from the on-premises database to the RDS Aurora DB instance over the VPN. 6. Change the DNS entry to point to the RDS Aurora DB instance. 7. Stop the replication.
- D. 1. Take the on-premises application offline. 2. Create a database export locally using database-native tools. 3. Import that into AWS using AWS Snowball. 4. Launch an Amazon RDS Aurora DB instance. 5. Load the data in the RDS Aurora DB instance from the export. 6. Change the DNS entry to point to the Amazon RDS Aurora DB instance. 7. Put the Amazon EC2 hosted application online.

**Answer: C**

#### NEW QUESTION 20

A company is using AWS CloudFormation to deploy its infrastructure. The company is concerned that, if a production CloudFormation stack is deleted, important data stored in Amazon RDS databases or Amazon EBS volumes might also be deleted. How can the company prevent users from accidentally deleting data in this way?

- A. Modify the CloudFormation templates to add a DeletionPolicy attribute to RDS and EBS resources.
- B. Configure a stack policy that disallows the deletion of RDS and EBS resources.
- C. Modify IAM policies to deny deleting RDS and EBS resources that are tagged with an "aws:cloudformation:stack-name" tag.
- D. Use AWS Config rules to prevent deleting RDS and EBS resources.

**Answer:** A

**Explanation:**

With the DeletionPolicy attribute you can preserve or (in some cases) backup a resource when its stack is deleted. You specify a DeletionPolicy attribute for each resource that you want to control. If a resource has no DeletionPolicy attribute, AWS CloudFormation deletes the resource by default. To keep a resource when its stack is deleted, specify Retain for that resource. You can use retain for any resource. For example, you can retain a nested stack, Amazon S3 bucket, or EC2 instance so that you can continue to use or modify those resources after you delete their stacks.

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

**NEW QUESTION 23**

A company will 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": "2012-10-27",
  "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

**NEW QUESTION 28**

A company uses Amazon S3 to store documents that may only be accessible to an Amazon EC2 instance in a certain virtual private cloud (VPC). The company fears that a malicious insider with access to this instance could also set up an EC2 instance in another VPC to access these documents.

Which of the following solutions will provide the required protection?

- A. Use an S3 VPC endpoint and an S3 bucket policy to limit access to this VPC endpoint.
- B. Use EC2 instance profiles and an S3 bucket policy to limit access to the role attached to the instance profile.
- C. Use S3 client-side encryption and store the key in the instance metadata.
- D. Use S3 server-side encryption and protect the key with an encryption context.

**Answer:** A

**Explanation:**

<https://docs.aws.amazon.com/vpc/latest/userguide/vpce-gateway.html>

Endpoint connections cannot be extended out of a VPC. Resources on the other side of a VPN connection, VPC peering connection, AWS Direct Connect connection, or ClassicLink connection in your VPC cannot use the endpoint to communicate with resources in the endpoint service.

**NEW QUESTION 30**

A company is operating a large customer service call center, and stores and processes call recordings with a custom application. Approximately 2% of the call recordings are transcribed by an offshore team for quality assurance purposes. These recordings take days. The company uses Linux servers for processing the call recording and managing the transcription queue. There is also a web application for the quality assurance staff to review and score call recordings.

The company plans to migrate the system to AWS to reduce storage costs and the time required to transcribe calls.

Which set of actions should be taken to meet the company's objectives?

- A. Upload the call recording to Amazon S3 from the call center

- B. Set up an S3 lifecycle policy to move the call recordings to Amazon S3 Glacier after 90 day
- C. Use an AWS Lambda trigger to transcribe the call recordings with Amazon Transcrib
- D. Use Amazon S3, Amazon API Gateway and Lambda to host the review and scoring application.
- E. Upload the call recordings to Amazon S3 from the call cente
- F. Set up an S3 lifecycle policy to move the call recordings to Amazon S3 Glacier after 90 day
- G. Use an AWS Lambda trigger to transcribe the call recordings with Amazon Mechanical trun
- H. Use Amazon EC2 instances in an Auto Scaling group behind an Application Balancer to host the review and scoring application.
- I. Use Amazon EC2 instances in an Auto Scaling group behind an Application Load Balancer to host the review and scoring applicatio
- J. Upload the call recordings to this application from the call center and store them on an Amazon EFS mount poin
- K. Use AWS Backup to archive the call recording after 90 day
- L. Transcribe the call recordings with Amazon Transcribe.
- M. Upload the call recording to Amazon S3 from the call center and put the object key in an Amazon SQS queu
- N. Set up an S3 lifecycle policy to move the call recordings to Amazon S3 Glacier after 90 day
- O. Use Amazon EC2 instances in the queue as the scaling metri
- P. Use Amazon S3, Amazon API Gateway, and AWS Lambda to host the review and scoring application.

**Answer: B**

#### NEW QUESTION 35

A company is moving a business-critical, multi-tier application to AWS. The architecture consists of a desktop client application and server infrastructure. The server infrastructure resides in an on-premises data center that frequently fails to maintain the application uptime SLA of 99.95%. A Solutions Architect must re-architect the application to ensure that it can meet or exceed the SLA.

The application contains a PostgreSQL database running on a single virtual machine. The business logic and presentation layers are load balanced between multiple virtual machines. Remote users complain about slow load times while using this latency-sensitive application.

Which of the following will meet the availability requirements with little change to the application while improving user experience and minimizing costs?

- A. Migrate the database to a PostgreSQL database in Amazon EC2. Host the application and presentation layers in automatically scaled Amazon ECS containers behind an Application Load Balance
- B. Allocate an Amazon WorkSpaces Workspace for each end user to improve the user experience.
- C. Migrate the database to an Amazon RDS Aurora PostgreSQL configuratio
- D. Host the application and presentation layers in an Auto Scaling configuration on Amazon EC2 instances behind an Application Load Balance
- E. Use Amazon AppStream 2.0 to improve the user experience.
- F. Migrate the database to an Amazon RDS PostgreSQL Multi-AZ configuratio
- G. Host the application and presentation layers in automatically scaled AWS Fargate containers behind a Network Load Balance
- H. Use Amazon ElastiCache to improve the user experience.
- I. Migrate the database to an Amazon Redshift cluster with at least two node
- J. Combine and host the application and presentation layers in automatically scaled Amazon ECS containers behind an Application Load Balance
- K. Use Amazon CloudFront to improve the user experience.

**Answer: B**

#### NEW QUESTION 39

A company has developed a new billing application that will be released in two weeks. Developers are testing the application running on 10 EC2 instances managed by an Auto Scaling group in subnet 172.31.0.0/24 within VPC A with CIDR block 172.31.0.0/16. The Developers noticed connection timeout errors in the application logs while connecting to an Oracle database running on an Amazon EC2 instance in the same region within VPC B with CIDR block 172.50.0.0/16. The IP of the database instance is hard-coded in the application instances.

Which recommendations should a Solutions Architect present to the Developers to solve the problem in a secure way with minimal maintenance and overhead?

- A. Disable the SrcDestCheck attribute for all instances running the application and Oracle Database. Change the default route of VPC A to point ENI of the Oracle Database that has an IP address assigned within the range of 172.50.0.0/26
- B. Create and attach internet gateways for both VPC
- C. Configure default routes to the Internet gateways for both VPC
- D. Assign an Elastic IP for each Amazon EC2 instance in VPC A
- E. Create a VPC peering connection between the two VPCs and add a route to the routing table of VPC A that points to the IP address range of 172.50.0.0/16
- F. Create an additional Amazon EC2 instance for each VPC as a customer gateway; create one virtual private gateway (VGW) for each VPC, configure an end-to-end VPC, and advertise the routes for 172.50.0.0/16

**Answer: C**

#### NEW QUESTION 41

A development team has created a series of AWS CloudFormation templates to help deploy services. They created a template for a network/virtual private (VPC) stack, a database stack, a bastion host stack, and a web application-specific stack. Each service requires the deployment of at least:

Each template has multiple input parameters that make it difficult to deploy the services individually from the AWS CloudFormation console. The input parameters from one stack are typically outputs from other stacks. For example, the VPC ID, subnet IDs, and security groups from the network stack may need to be used in the application stack or database stack.

Which actions will help reduce the operational burden and the number of parameters passed into a service deployment? (Choose two.)

- A. Create a new AWS CloudFormation template for each servic
- B. After the existing templates to use cross-stack references to eliminate passing many parameters to each templat
- C. Call each required stack for the application as a nested stack from the new stac
- D. Call the newly created service stack from the AWS CloudFormation console to deploy the specific service with a subset of the parameters previously required.
- E. Create a new portfolio in AWS Service Catalog for each servic
- F. Create a product for each existing AWS CloudFormation template required to build the servic
- G. Add the products to the portfolio that represents that service in AWS Service Catalo
- H. To deploy the service, select the specific service portfolio and launch the portfolio with the necessary parameters to deploy all templates.
- I. Set up an AWS CodePipeline workflow for each servic
- J. For each existing template, choose AWS CloudFormation as a deployment actio
- K. Add the AWS CloudFormation template to the deployment actio
- L. Ensure that the deployment actions are processed to make sure that dependences are obeye
- M. Use configuration files and scripts to share parameters between the stack

- N. To launch the service, execute the specific template by choosing the name of the service and releasing a change.
- O. Use AWS Step Functions to define a new service
- P. Create a new AWS CloudFormation template for each service
- Q. After the existing templates to use cross-stack references to eliminate passing many parameters to each template
- R. Call each required stack for the application as a nested stack from the new service template
- S. Configure AWS Step Functions to call the service template directly
- T. In the AWS Step Functions console, execute the step.
- . Create a new portfolio for the Services in AWS Service Catalog
- . Create a new AWS CloudFormation template for each service
- . After the existing templates to use cross-stack references to eliminate passing many parameters to each template
- . Call each required stack for the application as a nested stack from the new stack
- . Create a product for each application
- . Add the service template to the product
- . Add each new product to the portfolio
- . Deploy the product from the portfolio to deploy the service with the necessary parameters only to start the deployment.

**Answer:** AE

#### NEW QUESTION 44

A bank is designing an online customer service portal where customers can chat with customer service agents. The portal is required to maintain a 15-minute RPO or RTO in case of a regional disaster. Banking regulations require that all customer service chat transcripts must be preserved on durable storage for at least 7 years, chat conversations must be encrypted in-flight, and transcripts must be encrypted at rest. The Data Lost Prevention team requires that data at rest must be encrypted using a key that the team controls, rotates, and revokes. Which design meets these requirements?

- A. The chat application logs each chat message into Amazon CloudWatch Log
- B. A scheduled AWS Lambda function invokes a CloudWatch Log
- C. CreateExportTask every 5 minutes to export chat transcripts to Amazon S3. The S3 bucket is configured for cross-region replication to the backup region
- D. Separate AWS KMS keys are specified for the CloudWatch Logs group and the S3 bucket.
- E. The chat application logs each chat message into two different Amazon CloudWatch Logs groups in two different regions, with the same AWS KMS key applied
- F. Both CloudWatch Logs groups are configured to export logs into an Amazon Glacier vault with a 7-year vault lock policy with a KMS key specified.
- G. The chat application logs each chat message into Amazon CloudWatch Log
- H. A subscription filter on the CloudWatch Logs group feeds into an Amazon Kinesis Data Firehose which streams the chat messages into an Amazon S3 bucket in the backup region
- I. Separate AWS KMS keys are specified for the CloudWatch Logs group and the Kinesis Data Firehose.
- J. The chat application logs each chat message into Amazon CloudWatch Log
- K. The CloudWatch Logs group is configured to export logs into an Amazon Glacier vault with a 7-year vault lock policy
- L. Glacier cross-region replication mirrors chat archives to the backup region
- M. Separate AWS KMS keys are specified for the CloudWatch Logs group and the Amazon Glacier vault.

**Answer:** B

#### NEW QUESTION 45

A Solutions Architect wants to make sure that only AWS users or roles with suitable permissions can access a new Amazon API Gateway endpoint. The Solutions Architect wants an end-to-end view of each request to analyze the latency of the request and create service maps. How can the Solutions Architect design the API Gateway access control and perform request inspections?

- A. For the API Gateway method set the authorization to AWS\_IAM. Then, give the IAM user or role execute-api:Invoke permission on the REST API resource. Enable the API caller to sign requests with AWS Signature when accessing the endpoint. Use AWS X-Ray to trace and analyze user requests to API Gateway.
- B. For the API Gateway resource set CORS to enabled and only return the company's domain. mAccess-Control-Allow-Origin headers. Then give the IAM user or role execute-api:Invoke permission on the REST API resource. Use Amazon CloudWatch to trace and analyze user requests to API Gateway.
- C. Create an AWS Lambda function as the custom authorizer. Ask the API client to pass the key and secret when making the call and then use Lambda to validate the key/secret pair against the IAM system. Use AWS X-Ray to trace and analyze user requests to API Gateway.
- D. Create a client certificate for API Gateway. Distribute the certificate to the AWS users and roles that need to access the endpoint. Enable the API caller to pass the client certificate when accessing the endpoint. Use Amazon CloudWatch to trace and analyze user requests to API Gateway.

**Answer:** D

#### NEW QUESTION 47

A three-tier web application runs on Amazon EC2 instances. Cron daemons are used to trigger scripts that collect the web server, application, and database logs and send them to a centralized location every hour. Occasionally, scaling events or unplanned outages have caused the instances to stop before the latest logs were collected, and the log files were lost.

Which of the following options is the MOST reliable way of collecting and preserving the log files?

- A. Update the cron jobs to run every 5 minutes instead of every hour to reduce the possibility of log messages being lost in an outage.
- B. Use Amazon CloudWatch Events to trigger Amazon Systems Manager Run Command to invoke the log collection scripts more frequently to reduce the possibility of log messages being lost in an outage.
- C. Use the Amazon CloudWatch Logs agent to stream log messages directly to CloudWatch Logs. Configure the agent with a batch count of 1 to reduce the possibility of log messages being lost in an outage.
- D. Use Amazon CloudWatch Events to trigger AWS Lambda to SSH into each running instance and invoke the log collection scripts more frequently to reduce the possibility of log messages being lost in an outage.

**Answer:** C

#### Explanation:

<https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/AgentReference.html>

#### NEW QUESTION 52

A company has an Amazon VPC that is divided into a public subnet and a private subnet. A web application runs in Amazon VPC, and each subnet has its own

NACL The public subnet has a CIDR of 10.0.0.0/24. An Application Load Balancer is deployed to the public subnet. The private subnet has a CIDR of 10.0.1.0/24. Amazon EC2 instances that run a web server on port 80 are launched into the private subnet. Only network traffic that is required for the Application Load Balancer to access the web application can be allowed to travel between the public and private subnets. What collection of rules should be written to ensure that the private subnet's NACL meets the requirement? (Select TWO.)

- A. An inbound rule for port 80 from source 0.0.0.0/0
- B. An inbound rule for port 80 from source 10.0.0.0/24
- C. An outbound rule for port 80 to destination 0.0.0.0/0
- D. An outbound rule for port 80 to destination 10.0.0.0/24
- E. An outbound rule for ports 1024 through 65535 to destination 10.0.0.0/24

**Answer:** BE

#### NEW QUESTION 55

A Solutions Architect is designing a network solution for a company that has applications running in a data center in Northern Virginia. The applications in the company's data center require predictable performance to applications running in a virtual private cloud (VPC) located in us-east-1, and a secondary VPC in us-west-2 within the same account. The company data center is collocated in an AWS Direct Connect facility that serves the us-east-1 region. The company has already ordered an AWS Direct Connect connection and a cross-connect has been established. Which solution will meet the requirements at the LOWEST cost?

- A. Provision a Direct Connect gateway and attach the virtual private (VGW) for the VPC in us-east-1 and the VGW for the VPC in us-west-2. Create a private VIF on the Direct Connect connection and associate it to the Direct Connect gateway.
- B. Create private VIFs on the Direct Connect connection for each of the company's VPCs in the us-east-1 and us-west-2 region
- C. Configure the company's data center router to connect directly with the VPCs in those regions via the private VIFs.
- D. Deploy a transit VPC solution using Amazon EC2-based router instances in the us-east-1 region. Establish IPsec VPN tunnels between the transit routers and virtual private gateways (VGWs) located in the us-east-1 and us-west-2 regions, which are attached to the company's VPCs in those region
- E. Create a public VIF on the Direct Connect connection and establish IPsec VPN tunnels over the public VIF between the transit routers and the company's data center router.
- F. Order a second Direct Connect connection to a Direct Connect facility with connectivity to the us-west-2 region
- G. Work with partner to establish a network extension link over dark fiber from the Direct Connect facility to the company's data center
- H. Establish private VIFs on the Direct Connect connections for each of the company's VPCs in the respective region
- I. Configure the company's data center router to connect directly with the VPCs in those regions via the private VIFs.

**Answer:** A

#### Explanation:

<https://aws.amazon.com/blogs/aws/new-aws-direct-connect-gateway-inter-region-vpc-access/>

#### NEW QUESTION 60

A company is implementing a multi-account strategy; however, the Management team has expressed concerns that services like DNS may become overly complex. The company needs a solution that allows private DNS to be shared among virtual private clouds (VPCs) in different accounts. The company will have approximately 50 accounts in total. What solution would create the LEAST complex DNS architecture and ensure that each VPC can resolve all AWS resources?

- A. Create a shared services VPC in a central account, and create a VPC peering connection from the shared services VPC to each of the VPCs in the other account
- B. Within Amazon Route 53, create a privately hosted zone in the shared services VPC and resource record sets for the domain and subdomains. Programmatically associate other VPCs with the hosted zone.
- C. Create a VPC peering connection among the VPCs in all account
- D. Set the VPC attributes enableDnsHostnames and enableDnsSupport to "true" for each VPC
- E. Create an Amazon Route 53 private zone for each VPC
- F. Create resource record sets for the domain and subdomain
- G. Programmatically associate the hosted zones in each VPC with the other VPCs.
- H. Create a shared services VPC in a central account
- I. Create a VPC peering connection from the VPCs in other accounts to the shared services VPC
- J. Create an Amazon Route 53 privately hosted zone in the shared services VPC with resource record sets for the domain and subdomain
- K. Allow UDP and TCP port 53 over the VPC peering connections.
- L. Set the VPC attributes enableDnsHostnames and enableDnsSupport to "false" in every VPC
- M. Create an AWS Direct Connect connection with a private virtual interface
- N. Allow UDP and TCP port 53 over the virtual interface
- O. Use the on-premises DNS servers to resolve the IP addresses in each VPC on AWS.

**Answer:** A

#### Explanation:

<https://aws.amazon.com/blogs/networking-and-content-delivery/centralized-dns-management-of-hybrid-cloud-w>

#### NEW QUESTION 65

A large multinational company runs a timesheet application on AWS that is used by staff across the world. The application runs on Amazon EC2 instances in an Auto Scaling group behind an Elastic Load Balancing (ELB) load balancer, and stores in an Amazon RDS MySQL Multi-AZ database instance. The CFO is concerned about the impact on the business if the application is not available. The application must not be down for more than two hours, but the solution must be as cost-effective as possible. How should the Solutions Architect meet the CFO's requirements while minimizing data loss?

- A. In another region, configure a read replica and create a copy of the infrastructure
- B. When an issue occurs, promote the read replica and configure as an Amazon RDS Multi-AZ database instance
- C. Update the DNS to point to the other region's ELB.
- D. Configure a 1-day window of 60-minute snapshots of the Amazon RDS Multi-AZ database instance. Create an AWS CloudFormation template of the application infrastructure that uses the latest snapshots

- E. When an issue occurs, use the AWS CloudFormation template to create the environment in another regio
- F. Update the DNS record to point to the other region's ELB.
- G. Configure a 1-day window of 60-minute snapshots of the Amazon RDS Multi-AZ database instance which is copied to another regio
- H. Crate an AWS CloudFormation template of the application infrastructure that uses the latest copied snapsho
- I. When an issue occurs, use the AWS CloudFormation template to create the environment in another regio
- J. Update the DNS record to point to the other region's ELB.
- K. Configure a read replica in another regio
- L. Create an AWS CloudFormation template of the application infrastrucur
- M. When an issue occurs, promote the read replica and configure as an Amazon RDSMulti-AZ database instance and use the AWS CloudFormation template to create the environment in another region using the promoted Amazon RDS instanc
- N. Update the DNS record to point to the other region's ELB.

**Answer: D**

#### NEW QUESTION 69

A company's CISO has asked a Solutions Architect to re-engineer the company's current CI/CD practices to make sure patch deployments to its applications can happen as quickly as possible with minimal downtime if vulnerabilities are discovered. The company must also be able to quickly roll back a change in case of errors. The web application is deployed in a fleet of Amazon EC2 instances behind an Application Load Balancer. The company is currently using GitHub to host the application source code and has configured an AWS CodeBuild project to build the application. The company also intends to use AWS CodePipeline to trigger builds from GitHub commits using the existing CodeBuild project. What CI/CD configuration meets all of the requirements?

- A. Configure CodePipeline with a deploy stage using AWS CodeDeploy configured for in-place deploymen
- B. Monitor the newly deployed code, and if there are any issues, push another code update.
- C. Configure CodePipeline with a deploy stage using AWS CodeDeploy configure for blue/green deployment
- D. Monitor the new deployed code and if there are any issues, trigger a manual rollback using CodeDeploy.
- E. Configure CodePipeline with a deploy stage using AWS CloudFormation to create a pipeline for test and production stack
- F. Monitor the newly deployed cod and if there are any issues push another code update.
- G. Configure the CodePipeline with a deploy stage using AWS OpsWorks and in-place deployments. Monitor the newly deployed code and if there are any issues, push another code update.

**Answer: B**

#### NEW QUESTION 71

A company has an application that uses Amazon EC2 instances in an Auto Scaling group. The Quality Assurance (QA) department needs to launch a large number of short-lived environments to test the application. The application environments are currently launched by the Manager of the department using an AWS CloudFormation template. To launch the stack, the Manager uses a role with permission to use CloudFormation, EC2 and Auto Scaling APIs. The Manager wants to allow testers to launch their own environments, but does not want to grant broad permission to each user. Which set up would achieve these goals?

- A. Upload the AWS CloudFormation template to Amazon S3. Give users in the QA department permission to assume the Manager's role and add a policy that restricts the permissions to the template and the resources it create
- B. Train users to launch the template from the CloudFormation console.
- C. Create an AWS Service Catalog product form the environment templat
- D. Add a launch constraint to the product with the existing rol
- E. Give users in the QA department permission to use AWS Service Catalog APIs onl
- F. Train users to launch the templates form the AWS Service Catalog console.
- G. Upload the AWS CloudFormation template to Amazon S3. Give users in the QA department permission to use CloudFormation and S3 APIs, with conditions that restrict the permission to the template and the resources it create
- H. Train users to launch the template form the CloudFormation console.
- I. Create an AWS Elastic Beanstalk application from the environment templat
- J. Give users in the QA department permission to use Elastic Beanstalk permissions onl
- K. Train users to launch Elastic beanstalk environments with the Elastic Beanstalk CLI, passing the existing role to the environment as a service role.

**Answer: B**

#### Explanation:

<https://aws.amazon.com/blogs/mt/how-to-launch-secure-and-governed-aws-resources-with-aws-cloudformation->

#### NEW QUESTION 72

A retail company has a custom NET web application running on AWS that uses Microsoft SQL Server for the database The application servers maintain a user's session locally.

Which combination of architecture changes are needed ensure all tiers of the solution are highly available? (Select THREE.)

- A. Refactor the application to store the user's session in Amazon ElastiCache Use Application Load Balancers to distribute the load between application instances
- B. Set up the database to generate hourly snapshots using Amazon EBS Configure an Amazon CloudWatch Events rule to launch a new database instance if the primary one fails
- C. Migrate the database to Amazon RDS tor SQL Server Configure the RDS instance to use a Multi-AZ deployment
- D. Move the NET content to an Amazon S3 bucket Configure the bucket for static website hosting
- E. Put the application instances in an Auto Scaling group Configure the Auto Scaling group to create new instances if an instance becomes unhealthy
- F. Deploy Amazon CloudFront in front of the application tier Configure CloudFront to serve content from healthy application instances only

**Answer: BDE**

#### NEW QUESTION 73

A Solutions Architect is redesigning an image-viewing and messaging platform to be delivered as SaaS. Currently, there is a farm of virtual desktop infrastructure (VDI) that runs a desktop image-viewing application and a desktop messaging application. Both applications use a shared database to manage user accounts and sharing. Users log in from a web portal that launches the applications and streams the view of the application on the user's machine. The Development Operations team wants to move away from using VDI and wants to rewrite the application.

What is the MOST cost-effective architecture that offers both security and ease of management?

- A. Run a website from an Amazon S3 bucket with a separate S3 bucket for images and messaging data. Call AWS Lambda functions from embedded JavaScript to manage the dynamic content, and use Amazon Cognito for user and sharing management.
- B. Run a website from Amazon EC2 Linux servers, storing the images in Amazon S3, and use Amazon Cognito for user accounts and sharing.
- C. Create AWS CloudFormation templates to launch the application by using EC2 user data to install and configure the application.
- D. Run a website as an AWS Elastic Beanstalk application, storing the images in Amazon S3, and using an Amazon RDS database for user accounts and sharing.
- E. Create AWS CloudFormation templates to launch the application and perform blue/green deployments.
- F. Run a website from an Amazon S3 bucket that authorizes Amazon AppStream to stream applications for a combined image viewer and messenger that stores images in Amazon S3. Have the website use an Amazon RDS database for user accounts and sharing.

**Answer:** D

**Explanation:**

<https://docs.aws.amazon.com/appstream2/latest/developerguide/managing-images.html>

**NEW QUESTION 78**

An online e-commerce business is running a workload on AWS. The application architecture includes a web tier, an application tier for business logic, and a database tier for user and transactional data management. The database server has a 100 GB memory requirement. The business requires cost-efficient disaster recovery for the application with an RTO of 5 minutes and an RPO of 1 hour. The business also has a regulatory requirement for out-of-region disaster recovery with a minimum distance between the primary and alternate sites of 250 miles.

Which of the following options can the Solutions Architect design to create a comprehensive solution for this customer that meets the disaster recovery requirements?

- A. Back up the application and database data frequently and copy them to Amazon S3. Replicate the backups using S3 cross-region replication, and use AWS CloudFormation to instantiate infrastructure for disaster recovery and restore data from Amazon S3.
- B. Employ a pilot light environment in which the primary database is configured with mirroring to build a standby database on m4.large in the alternate region.
- C. Use AWS CloudFormation to instantiate the web servers, application servers and load balancers in case of a disaster to bring the application up in the alternate region.
- D. Vertically resize the database to meet the full production demands, and use Amazon Route 53 to switch traffic to the alternate region.
- E. Use a scaled-down version of the fully functional production environment in the alternate region that includes one instance of the web server, one instance of the application server, and a replicated instance of the database server in standby mode.
- F. Place the web and the application tiers in an Auto Scaling group behind a load balancer, which can automatically scale when the load arrives to the application.
- G. Use Amazon Route 53 to switch traffic to the alternate region.
- H. Employ a multi-region solution with fully functional web, application, and database tiers in both regions with equivalent capacity.
- I. Activate the primary database in one region only and the standby database in the other region.
- J. Use Amazon Route 53 to automatically switch traffic from one region to another using health check routing policies.

**Answer:** C

**NEW QUESTION 80**

A Solutions Architect must update an application environment within AWS Elastic Beanstalk using a blue/green deployment methodology. The Solutions Architect creates an environment that is identical to the existing application environment and deploys the application to the new environment.

What should be done next to complete the update?

- A. Redirect to the new environment using Amazon Route 53
- B. Select the Swap Environment URLs option
- C. Replace the Auto Scaling launch configuration
- D. Update the DNS records to point to the green environment

**Answer:** B

**Explanation:**

<https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/using-features.CNAMEswap.html>

**NEW QUESTION 82**

A Solutions Architect has created an AWS CloudFormation template for a three-tier application that contains an Auto Scaling group of Amazon EC2 instances running a custom AMI.

The Solutions Architect wants to ensure that future updates to the custom AMI can be deployed to a running stack by first updating the template to refer to the new AMI, and then invoking UpdateStack to replace the EC2 instances with instances launched from the new AMI.

How can updates to the AMI be deployed to meet these requirements?

- A. Create a change set for a new version of the template, view the changes to the running EC2 instances to ensure that the AMI is correctly updated, and then execute the change set.
- B. Edit the AWS::AutoScaling::LaunchConfiguration resource in the template, changing its DeletionPolicy to Replace.
- C. Edit the AWS::AutoScaling::AutoScalingGroup resource in the template, inserting an UpdatePolicy attribute.
- D. Create a new stack from the updated template.
- E. Once it is successfully deployed, modify the DNS records to point to the new stack and delete the old stack.

**Answer:** C

**Explanation:**

References:

<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-properties-as-launchconfig.html>

**NEW QUESTION 84**

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? (Choose 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

#### NEW QUESTION 87

A company deployed a three-tier web application in two regions: us-east-1 and eu-west-1. The application must be active in both regions at the same time. The database tier of the application uses a single Amazon RDS Aurora database globally, with a master in us-east-1 and a read replica in eu-west-1. Both regions are connected by a VPN.

The company wants to ensure that the application remains available even in the event of a region-level failure of all of the application's components. It is acceptable for the application to be in read-only mode for up to 1 hour. The company plans to configure two Amazon Route 53 record sets, one for each of the regions.

How should the company complete the configuration to meet its requirements while providing the lowest latency for the application end-users? (Choose two.)

- A. Use failover routing and configure the us-east-1 record set as primary and the eu-west-1 record set as secondary
- B. Configure an HTTP health check for the web application in us-east-1, and associate it to the us-east-1 record set.
- C. Use weighted routing and configure each record set with a weight of 50. Configure an HTTP health check for each region, and attach it to the record set for that region.
- D. Use latency-based routing for both record set
- E. Configure a health check for each region and attach it to the record set for that region.
- F. Configure an Amazon CloudWatch alarm for the health checks in us-east-1, and have it invoke an AWS Lambda function that promotes the read replica in eu-west-1.
- G. Configure an Amazon RDS event notifications to react to the failure of the database in us-east-1 by invoking an AWS Lambda function that promotes the read replica in eu-west-1.

**Answer:** CE

#### Explanation:

<https://docs.aws.amazon.com/lambda/latest/dg/services-rds.html>

#### NEW QUESTION 90

An advisory firm is creating a secure data analytics solution for its regulated financial services users. Users will upload their raw data to an Amazon S3 bucket, where they have PutObject permissions only. Data will be analyzed by applications running on an Amazon EMR cluster launched in a VPC. The firm requires that the environment be isolated from the internet. All data at rest must be encrypted using keys controlled by the firm.

Which combination of actions should the Solutions Architect take to meet the user's security requirements? (Select TWO)

- A. Launch the Amazon EMR cluster in a private subnet configured to use an AWS KMS CMK for at-rest encryption. Configure a gateway VPC endpoint (or Amazon S3) and an interface VPC endpoint for AWS KMS.
- B. Launch the Amazon EMR cluster in a private subnet configured to use an AWS KMS CMK for at-rest encryption. Configure a gateway VPC endpoint for Amazon S3 and a NAT gateway to access AWS KMS.
- C. Launch the Amazon EMR cluster in a private subnet configured to use an AWS CloudHSM appliance for at-rest encryption. Configure a gateway VPC endpoint for Amazon S3 and an interface VPC endpoint for CloudHSM.
- D. Configure the S3 endpoint policies to permit access to the necessary data buckets only.
- E. Configure the S3 bucket policies to permit access using an aws:sourceVpce condition to match the S3 endpoint ID.

**Answer:** AC

#### NEW QUESTION 94

A company runs a legacy system on a single m4.2xlarge Amazon EC2 instance with Amazon EBS storage. The EC2 instance runs both the web server and a self-managed Oracle database. A snapshot is made of the EBS volume every 12 hours, and an AMI was created from the fully configured EC2 instance.

A recent event that terminated the EC2 instance led to several hours of downtime. The application was successfully launched from the AMI, but the age of the EBS snapshot and the repair of the database resulted in the loss of 8 hours of data. The system was also down for 4 hours while the Systems Operators manually performed these processes.

What architectural changes will minimize downtime and reduce the chance of lost data?

- A. Create an Amazon CloudWatch alarm to automatically recover the instance.
- B. Create a script that will check and repair the database upon reboot.
- C. Subscribe the Operations team to the Amazon SNS message generated by the CloudWatch alarm.
- D. Run the application on m4.xlarge EC2 instances behind an Elastic Load Balancer/Application Load Balance.
- E. Run the EC2 instances in an Auto Scaling group across multiple Availability Zones with a minimum instance count of two.
- F. Migrate the database to an Amazon RDS Oracle Multi-AZ DB instance.
- G. Run the application on m4.2xlarge EC2 instances behind an Elastic Load Balancer/Application Load Balance.
- H. Run the EC2 instances in an Auto Scaling group across multiple Availability Zones with a minimum instance count of one.
- I. Migrate the database to an Amazon RDS Oracle Multi-AZ DB instance.
- J. Increase the web server instance count to two m4.xlarge instances and use Amazon Route 53 round-robin load balancing to spread the load.
- K. Enable Route 53 health checks on the web server.
- L. Migrate the database to an Amazon RDS Oracle Multi-AZ DB instance.

**Answer:** B

#### Explanation:

Ensures that there are at least two EC instances, each of which is in a different AZ. It also ensures that the database spans multiple AZs. Hence this meets all the criteria.

<https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/routing-policy.html>

#### NEW QUESTION 97

A media company has a 30-TB repository of digital news videos. These videos are stored on tape in an on-premises tape library and referenced by a Media Asset Management (MAM) system. The company wants to enrich the metadata for these videos in an automated fashion and put them into a searchable catalog by using a MAM feature. The company must be able to search based on information in the video, such as objects, scenery items, or people's faces. A catalog is available that contains faces of people who have appeared in the videos that include an image of each person. The company would like to migrate these videos to AWS.

The company has a high-speed AWS Direct Connect connection with AWS and would like to move the MAM solution video content directly from its current file system.

How can these requirements be met by using the LEAST amount of ongoing management overhead and causing MINIMAL disruption to the existing system?

- A. Set up an AWS Storage Gateway, file gateway appliance on-premise
- B. Use the MAM solution to extract the videos from the current archive and push them into the file gateway
- C. Use the catalog of faces to build a collection in Amazon Rekognition
- D. Build an AWS Lambda function that invokes the Rekognition Javascript SDK to have Rekognition pull the video from the Amazon S3 files backing the file gateway, retrieve the required metadata, and push the metadata into the MAM solution.
- E. Set up an AWS Storage Gateway, tape gateway appliance on-premise
- F. Use the MAM solution to extract the videos from the current archive and push them into the tape gateway
- G. Use the catalog of faces to build a collection in Amazon Rekognition
- H. Build an AWS Lambda function that invokes the Rekognition Javascript SDK to have Amazon Rekognition process the video in the tape gateway, retrieve the required metadata, and push the metadata into the MAM solution.
- I. Configure a video ingestion stream by using Amazon Kinesis Video Stream
- J. Use the catalog of faces to build a collection in Amazon Rekognition
- K. Stream the videos from the MAM solution into Kinesis Video Stream
- L. Configure Amazon Rekognition to process the streamed video
- M. Then, use a stream consumer to retrieve the required metadata, and push the metadata into the MAM solution
- N. Configure the stream to store the videos in Amazon S3.
- O. Set up an Amazon EC2 instance that runs the OpenCV libraries
- P. Copy the videos, images, and face catalog from the on-premises library into an Amazon EBS volume mounted on this EC2 instance
- Q. Process the videos to retrieve the required metadata, and push the metadata into the MAM solution while also copying the video files to an Amazon S3 bucket.

**Answer: C**

#### Explanation:

<https://docs.aws.amazon.com/rekognition/latest/dg/streaming-video.html>

#### NEW QUESTION 100

An enterprise runs 103 line-of-business applications on virtual machines in an on-premises data center. Many of the applications are simple PHP, Java, or Ruby web applications, are no longer actively developed, and serve little traffic.

Which approach should be used to migrate these applications to AWS with the LOWEST infrastructure costs ?

- A. Deploy the applications to single-instance AWS Elastic Beanstalk environments without a load balancer.
- B. Use AWS SMS to create AMIs for each virtual machine and run them in Amazon EC2.
- C. Convert each application to a Docker image and deploy to a small Amazon ECS cluster behind an Application Load Balancer.
- D. Use VM Import/Export to create AMIs for each virtual machine and run them in single-instance AWS Elastic Beanstalk environments by configuring a custom image.

**Answer: A**

#### Explanation:

<https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/using-features-managing-env-types.html>

#### NEW QUESTION 102

A company has created an account for individual Development teams, resulting in a total of 200 accounts. All accounts have a single virtual private cloud (VPC) in a single region with multiple microservices running in Docker containers that need to communicate with microservices in other accounts. The Security team requirements state that these microservices must not traverse the public internet, and only certain internal services should be allowed to call other individual services. If there is any denied network traffic for a service, the Security team must be notified of any denied requests, including the source IP.

How can connectivity be established between services while meeting the security requirements?

- A. Create a VPC peering connection between the VPC
- B. Use security groups on the instances to allow traffic from the security group IDs that are permitted to call the microservices
- C. Apply network ACLs to and allow traffic from the local VPC and peered VPCs only
- D. Within the task definition in Amazon ECS for each of the microservices, specify a log configuration by using the awslogs driver
- E. Within Amazon CloudWatch Logs, create a metric filter and alarm off of the number of HTTP 403 response
- F. Create an alarm when the number of messages exceeds a threshold set by the Security team.
- G. Ensure that no CIDR ranges are overlapping, and attach a virtual private gateway (VGW) to each VPC. Provision an IPsec tunnel between each VGW and enable route propagation on the route table
- H. Configure security groups on each service to allow the CIDR ranges of the VPCs on the other account
- I. Enable VPC Flow Logs, and use an Amazon CloudWatch Logs subscription filter for rejected traffic
- J. Create an IAM role and allow the Security team to call the AssumeRole action for each account.
- K. Deploy a transit VPC by using third-party marketplace VPN appliances running on Amazon EC2, dynamically routed VPN connections between the VPN appliance, and the virtual private gateways (VGWs) attached to each VPC within the region
- L. Adjust network ACLs to allow traffic from the local VPC only
- M. Apply security groups to the microservices to allow traffic from the VPN appliances only
- N. Install the awslogs agent on each VPN appliance, and configure logs to forward to Amazon CloudWatch Logs in the security account for the Security team to access.
- O. Create a Network Load Balancer (NLB) for each microservice
- P. Attach the NLB to a PrivateLink endpoint service and whitelist the accounts that will be consuming this service
- Q. Create an interface endpoint in the consumer VPC and associate a security group that allows only the security group IDs of the services authorized to call the producer service
- R. On the producer services, create security groups for each microservice and allow only the CIDR range of the allowed service
- S. Create VPC Flow Logs on each VPC to capture rejected traffic that will be delivered to an Amazon CloudWatch Logs group

T. Create a CloudWatch Logs subscription that streams the log data to a security account.

**Answer: D**

**Explanation:**

AWS PrivateLink provides private connectivity between VPCs, AWS services, and on-premises applications, securely on the Amazon network. AWS PrivateLink makes it easy to connect services across different accounts and VPCs to significantly simplify the network architecture. It seems like the next VPC peering.  
<https://aws.amazon.com/privatelink/>

**NEW QUESTION 107**

A company is creating an account strategy so that they can begin using AWS. The Security team will provide each team with the permissions they need to follow the principle of least privileged access. Teams would like to keep their resources isolated from other groups, and the Finance team would like each team's resource usage separated for billing purposes.

Which account creation process meets these requirements and allows for changes?

- A. Create a new AWS Organizations account
- B. Create groups in Active Directory and assign them to roles in AWS to grant federated access
- C. Require each team to tag their resources, and separate bills based on tag
- D. Control access to resources through IAM granting the minimally required privilege.
- E. Create individual accounts for each team
- F. Assign the security as the master account, and enable consolidated billing for all other accounts
- G. Create a cross-account role for security to manage accounts, and send logs to a bucket in the security account.
- H. Create a new AWS account, and use AWS Service Catalog to provide teams with the required resources. Implement a third-party billing to provide the Finance team with the resource use for each team based on tagging
- I. Isolate resources using IAM to avoid account sprawl
- J. Security will control and monitor logs and permissions.
- K. Create a master account for billing using Organizations, and create each team's account from that master account
- L. Create a security account for logs and cross-account access
- M. Apply service control policies on each account, and grant the Security team cross-account access to all accounts
- N. Security will create IAM policies for each account to maintain least privilege access.

**Answer: B**

**NEW QUESTION 111**

A company runs a Windows Server host in a public subnet that is configured to allow a team of administrators to connect over RDP to troubleshoot issues with hosts in a private subnet. The host must be available at all times outside of a scheduled maintenance window, and needs to receive the latest operating system updates within 3 days of release.

What should be done to manage the host with the LEAST amount of administrative effort?

- A. Run the host in a single-instance AWS Elastic Beanstalk environment
- B. Configure the environment with a custom AMI to use a hardened machine image from AWS Marketplace
- C. Apply system updates with AWS Systems Manager Patch Manager.
- D. Run the host on AWS WorkSpace
- E. Use Amazon WorkSpaces Application Manager (WAM) to harden the host
- F. Configure Windows automatic updates to occur every 3 days.
- G. Run the host in an Auto Scaling group with a minimum and maximum instance count of 1. Use a hardened machine image from AWS Marketplace
- H. Apply system updates with AWS Systems Manager Patch Manager.
- I. Run the host in AWS OpsWorks Stack
- J. Use a Chef recipe to harden the AMI during instance launch. Use an AWS Lambda scheduled event to run the Upgrade Operating System stack command to apply system updates.

**Answer: B**

**NEW QUESTION 114**

A company is moving a business-critical application onto AWS. It is a traditional three-tier web application using an Oracle database. Data must be encrypted in transit and at rest. The database hosts 12 TB of data. Network connectivity to the source Oracle database over the internet is allowed, and the company wants to reduce the operational costs by using AWS Managed Services where possible. All resources within the web and application tiers have been migrated. The database has a few tables and a simple schema using primary keys only; however, it contains many Binary Large Object (BLOB) fields. It was not possible to use the database's native replication tools because of licensing restrictions.

Which database migration solution will result in the LEAST amount of impact to the application's availability?

- A. Provision an Amazon RDS for Oracle instance
- B. Host the RDS database within a virtual private cloud (VPC) subnet with internet access, and set up the RDS database as an encrypted Read Replica of the source database
- C. Use SSL to encrypt the connection between the two databases
- D. Monitor the replication performance by watching the RDS ReplicaLag metric
- E. During the application maintenance window, shut down the on-premises database and switch over the application connection to the RDS instance when there is no more replication lag
- F. Promote the Read Replica into a standalone database instance.
- G. Provision an Amazon EC2 instance and install the same Oracle database software
- H. Create a backup of the source database using the supported tool
- I. During the application maintenance window, restore the backup into the Oracle database running in the EC2 instance
- J. Set up an Amazon RDS for Oracle instance, and create an import job between the database hosted in AWS
- K. Shut down the source database and switch over the database connections to the RDS instance when the job is complete.
- L. Use AWS DMS to load and replicate the dataset between the on-premises Oracle database and the replication instance hosted on AWS
- M. Provision an Amazon RDS for Oracle instance with Transparent Data Encryption (TDE) enabled and configure it as target for the replication instance
- N. Create a customer-managed AWS KMS master key to set it as the encryption key for the replication instance. Use AWS DMS tasks to load the data into the target RDS instance
- O. During the application maintenance window and after the load tasks reach the ongoing replication phase, switch the database connections to the new database.
- P. Create a compressed full database backup on the on-premises Oracle database during an application maintenance window

- Q. While the backup is being performed, provision a 10 Gbps AWS Direct Connect connection to increase the transfer speed of the database backup files to Amazon S3, and shorten the maintenance window period
- R. Use SSL/TLS to copy the files over the Direct Connect connection
- S. When the backup files are successfully copied, start the maintenance window, and use any of the Amazon RDS supported tools to import the data into a newly provisioned Amazon RDS for Oracle instance with encryption enabled
- T. Wait until the data is fully loaded and switch over the database connections to the new database
- . Delete the Direct Connect connection to cut unnecessary charges.

**Answer: C**

**Explanation:**

<https://aws.amazon.com/blogs/apn/oracle-database-encryption-options-on-amazon-rds/>  
<https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Appendix.Oracle.Options.AdvSecurity.htm> | (DMS in transit encryption)  
[https://docs.aws.amazon.com/dms/latest/userguide/CHAP\\_Security.html](https://docs.aws.amazon.com/dms/latest/userguide/CHAP_Security.html)

**NEW QUESTION 115**

A Solutions Architect is migrating a 10 TB PostgreSQL database to Amazon RDS for PostgreSQL. The company's internet link is 50 MB with a VPN in the Amazon VPC, and the Solutions Architect needs to migrate the data and synchronize the changes before the cutover. The cutover must take place within an 8-day period.

What is the LEAST complex method of migrating the database securely and reliably?

- A. Order an AWS Snowball device and copy the database using the AWS DM
- B. When the database is available in Amazon S3, use AWS DMS to load it to Amazon RDS, and configure a job to synchronize changes before the cutover.
- C. Create an AWS DMS job to continuously replicate the data from on premises to AWS
- D. Cutover to Amazon RDS after the data is synchronized.
- E. Order an AWS Snowball device and copy a database dump to the device
- F. After the data has been copied to Amazon S3, import it to the Amazon RDS instance
- G. Set up log shipping over a VPN to synchronize changes before the cutover.
- H. Order an AWS Snowball device and copy the database by using the AWS Schema Conversion Tool. When the data is available in Amazon S3, use AWS DMS to load it to Amazon RDS, and configure a job to synchronize changes before the cutover.

**Answer: B**

**NEW QUESTION 118**

A company is adding a new approved external vendor that only supports IPv6 connectivity. The company's backend systems sit in the private subnet of an Amazon VPC. The company uses a NAT gateway to allow these systems to communicate with external vendors over IPv4. Company policy requires systems that communicate with external vendors use a security group that limits access to only approved external vendors. The virtual private cloud (VPC) uses the default network ACL.

The Systems Operator successfully assigns IPv6 addresses to each of the backend systems. The Systems Operator also updates the outbound security group to include the IPv6 CIDR of the external vendor (destination). The systems within the VPC are able to ping one another successfully over IPv6. However, these systems are unable to communicate with the external vendor.

What changes are required to enable communication with the external vendor?

- A. Create an IPv6 NAT instance
- B. Add a route for destination 0.0.0.0/0 pointing to the NAT instance.
- C. Enable IPv6 on the NAT gateway
- D. Add a route for destination ::/0 pointing to the NAT gateway.
- E. Enable IPv6 on the internet gateway
- F. Add a route for destination 0.0.0.0/0 pointing to the IGW.
- G. Create an egress-only internet gateway
- H. Add a route for destination ::/0 pointing to the gateway.

**Answer: D**

**Explanation:**

<https://docs.aws.amazon.com/vpc/latest/userguide/egress-only-internet-gateway.html>

**NEW QUESTION 123**

A company is using AWS to run an internet-facing production application written in Node.js. The Development team is responsible for pushing new versions of their software directly to production. The application software is updated multiple times a day. The team needs guidance from a Solutions Architect to help them deploy the software to the production fleet quickly and with the least amount of disruption to the service.

Which option meets these requirements?

- A. Prepackage the software into an AMI and then use Auto Scaling to deploy the production fleet
- B. For software changes, update the AMI and allow Auto Scaling to automatically push the new AMI to production.
- C. Use AWS CodeDeploy to push the prepackaged AMI to production
- D. For software changes, reconfigure CodeDeploy with new AMI identification to push the new AMI to the production fleet.
- E. Use AWS Elastic Beanstalk to host the production application
- F. For software changes, upload the new application version to Elastic Beanstalk to push this to the production fleet using a blue/green deployment method.
- G. Deploy the base AMI through Auto Scaling and bootstrap the software using user data
- H. For software changes, SSH to each of the instances and replace the software with the new version.

**Answer: C**

**NEW QUESTION 127**

An enterprise company is using a multi-account AWS strategy. There are separate accounts for development, staging, and production workloads. To control costs and improve governance, the following requirements have been defined:

- The company must be able to calculate the AWS costs for each project
- The company must be able to calculate the AWS costs for each environment: development, staging, and production

- Commonly deployed IT services must be centrally managed
  - Business units can deploy pre-approved IT services only
  - Usage of AWS resources in the development account must be limited
- Which combination of actions should be taken to meet these requirements? (Select THREE )

- A. Apply environment, cost center, and application name tags to all taggable resources
- B. Configure custom budgets and define thresholds using Cost Explorer
- C. Configure AWS Trusted Advisor to obtain weekly emails with cost-saving estimates
- D. Create a portfolio for each business unit and add products to the portfolios using AWS CloudFormation in AWS Service Catalog
- E. Configure a billing alarm in Amazon CloudWatch.
- F. Configure SCPs in AWS Organizations to allow services available using AWS

**Answer:** CEF

#### NEW QUESTION 131

A company is migrating to the cloud. It wants to evaluate the configurations of virtual machines in its existing data center environment to ensure that it can size new Amazon EC2 instances accurately. The company wants to collect metrics, such as CPU, memory, and disk utilization, and it needs an inventory of what processes are running on each instance. The company would also like to monitor network connections to map communications between servers. Which would enable the collection of this data MOST cost effectively?

- A. Use AWS Application Discovery Service and deploy the data collection agent to each virtual machine in the data center.
- B. Configure the Amazon CloudWatch agent on all servers within the local environment and publish metrics to Amazon CloudWatch Logs.
- C. Use AWS Application Discovery Service and enable agentless discovery in the existing virtualization environment.
- D. Enable AWS Application Discovery Service in the AWS Management Console and configure the corporate firewall to allow scans over a VPN.

**Answer:** A

#### NEW QUESTION 134

A company has more than 100 AWS accounts, with one VPC per account, that need outbound HTTPS connectivity to the internet. The current design contains one NAT gateway per Availability Zone (AZ) in each VPC. To reduce costs and obtain information about outbound traffic, management has asked for a new architecture for internet access.

Which solution will meet the current needs, and continue to grow as new accounts are provisioned, while reducing costs?

- A. Create a transit VPC across two AZs using a third-party routing appliance
- B. Create a VPN connection to each VPC
- C. Default route internet traffic to the transit VPC.
- D. Create multiple hosted-private AWS Direct Connect VIFs, one per account, each with a Direct Connect gateway
- E. Default route internet traffic back to an on-premises router to route to the internet.
- F. Create a central VPC for outbound internet traffic
- G. Use VPC peering to default route to a set of redundant NAT gateway in the central VPC.
- H. Create a proxy fleet in a central VPC account
- I. Create an AWS PrivateLink endpoint service in the central VPC
- J. Use PrivateLink interface for internet connectivity through the proxy fleet.

**Answer:** D

#### Explanation:

user proxy fleet over PrivateLink. As explained in this AWS website:

<https://aws.amazon.com/blogs/networking-and-content-delivery/how-to-use-aws-privatelink-to-secure-and-scale>

#### NEW QUESTION 139

A company operating a website on AWS requires high levels of scalability, availability and performance. The company is running a Ruby on Rails application on Amazon EC2. It has a data tier on MySQL 5.6 on Amazon EC2 using 16 TB of Amazon EBS storage. Amazon CloudFront is used to cache application content. The Operations team is reporting continuous and unexpected growth of EBS volumes assigned to the MySQL database. The Solutions Architect has been asked to design a highly scalable, highly available, and high-performing solution.

Which solution is the MOST cost-effective at scale?

- A. Implement Multi-AZ and Auto Scaling for all EC2 instances in the current configuration
- B. Ensure that all EC2 instances are purchased as reserved instances
- C. Implement new elastic Amazon EBS volumes for the data tier.
- D. Design and implement the Docker-based containerized solution for the application using Amazon EC2
- E. Migrate to an Amazon Aurora MySQL Multi-AZ cluster
- F. Implement storage checks for Aurora MySQL storage utilization and an AWS Lambda function to grow the Aurora MySQL storage, as necessary
- G. Ensure that Multi-AZ architectures are implemented.
- H. Ensure that EC2 instances are right-sized and behind an Elastic Load Balancing load balancer. Implement Auto Scaling with EC2 instances
- I. Ensure that the reserved instances are purchased for fixed capacity and that Auto Scaling instances run on demand
- J. Migrate to an Amazon Aurora MySQL Multi-AZ cluster
- K. Ensure that Multi-AZ architectures are implemented.
- L. Ensure that EC2 instances are right-sized and behind an Elastic Load Balance
- M. Implement Auto Scaling with EC2 instances
- N. Ensure that Reserved instances are purchased for fixed capacity and that Auto Scaling instances run on demand
- O. Migrate to an Amazon Aurora MySQL Multi-AZ cluster
- P. Implement storage checks for Aurora MySQL storage utilization and an AWS Lambda function to grow Aurora MySQL storage, as necessary
- Q. Ensure Multi-AZ architectures are implemented.

**Answer:** C

#### NEW QUESTION 142

A Solutions Architect must establish a patching plan for a large mixed fleet of Windows and Linux servers. The patching plan must be implemented securely, be

audit ready, and comply with the company's business requirements.  
Which option will meet these requirements with MINIMAL effort?

- A. Install and use an OS-native patching service to manage the update frequency and release approval for all instance
- B. Use AWS Config to verify the OS state on each instance and report on any patch compliance issues.
- C. Use AWS Systems Manager on all instances to manage patchin
- D. Test patches outside of production and then deploy during a maintenance window with the appropriate approval.
- E. Use AWS OpsWorks for Chef Automate to run a set of scripts that will iterate through all instances of a given typ
- F. Issue the appropriate OS command to get and install updates on each instance, including any required restarts during the maintenance window.
- G. Migrate all applications to AWS OpsWorks and use OpsWorks automatic patching support to keep the OS up-to-date following the initial installatio
- H. Use AWS Config to provide audit and compliance reporting.

**Answer:** B

**Explanation:**

Only Systems Manager can patch both OS effectively on AWS and on premise.

**NEW QUESTION 143**

A company has a large on-premises Apache Hadoop cluster with a 20 PB HDFS database. The cluster is growing every quarter by roughly 200 instances and 1 PB. The company's goals are to enable resiliency for its Hadoop data, limit the impact of losing cluster nodes, and significantly reduce costs. The current cluster runs 24/7 and supports a variety of analysis workloads, including interactive queries and batch processing.

Which solution would meet these requirements with the LEAST expense and down time?

- A. Use AWS Snowmobile to migrate the existing cluster data to Amazon S3. Create a persistent Amazon EMR cluster initially sized to handle the interactive workload based on historical data from the on-premises cluster
- B. Store the data on EMRFS
- C. Minimize costs using Reserved Instances for master and core nodes and Spot Instances for task nodes, and auto scale task nodes based on Amazon CloudWatch metric
- D. Create job-specific, optimized clusters for batch workloads that are similarly optimized.
- E. Use AWS Snowmobile to migrate the existing cluster data to Amazon S3. Create a persistent Amazon EMR cluster of similar size and configuration to the current cluster
- F. Store the data on EMRFS
- G. Minimize costs by using Reserved Instance
- H. As the workload grows each quarter, purchase additional Reserved Instances and add to the cluster.
- I. Use AWS Snowball to migrate the existing cluster data to Amazon S3. Create a persistent Amazon EMR cluster initially sized to handle the interactive workloads based on historical data from the on-premises cluster
- J. Store the data on EMRFS
- K. Minimize costs using Reserved Instances for master and core nodes and Spot Instances for task nodes, and auto scale task nodes based on Amazon CloudWatch metric
- L. Create job-specific, optimized clusters for batch workloads that are similarly optimized.
- M. Use AWS Direct Connect to migrate the existing cluster data to Amazon S3. Create a persistent Amazon EMR cluster initially sized to handle the interactive workload based on historical data from the on-premises cluster
- N. Store the data on EMRFS
- O. Minimize costs using Reserved Instances for master and core nodes and Spot Instances for task nodes, and auto scale task nodes based on Amazon CloudWatch metric
- P. Create job-specific, optimized clusters for batch workloads that are similarly optimized.

**Answer:** A

**Explanation:**

Q: How should I choose between Snowmobile and Snowball?

To migrate large datasets of 10PB or more in a single location, you should use Snowmobile. For datasets less than 10PB or distributed in multiple locations, you should use Snowball. In addition, you should evaluate the amount of available bandwidth in your network backbone. If you have a high speed backbone with hundreds of Gb/s of spare throughput, then you can use Snowmobile to migrate the large datasets all at once. If you have limited bandwidth on your backbone, you should consider using multiple Snowballs to migrate the data incrementally.

**NEW QUESTION 148**

A company has an internal AWS Elastic Beanstalk worker environment inside a VPC that must access an external payment gateway API available on an HTTPS endpoint the public internet. Because of security policies, the payment gateway's Application team can grant access to only one public IP address.

Which architecture will set up an Elastic Beanstalk environment to access the company's application without making multiple changes on the company's end?

- A. Configure the Elastic Beanstalk application to place Amazon EC2 instances in a private subnet with an outbound route to a NAT gateway in a public subnet. Associate an Elastic IP address to the NAT gateway that can be whitelisted on the payment gateway application side
- B. Configure the Elastic Beanstalk application to place Amazon EC2 instances in a public subnet with an internet gateway. Associate an Elastic IP address to the internet gateway that can be whitelisted on the payment gateway application side
- C. Configure the Elastic Beanstalk application to place Amazon EC2 instances in a private subnet. Set an `https_proxy` application parameter to send outbound HTTPS connections to an EC2 proxy server deployed in a public subnet. Associate an Elastic IP address to the EC2 proxy host that can be whitelisted on the payment gateway application side
- D. Configure the Elastic Beanstalk application to place Amazon EC2 instances in a public subnet. Set the `https_proxy` and `no_proxy` application parameters to send non-VPC outbound HTTPS connections to an EC2 proxy server deployed in a public subnet. Associate an Elastic IP address to the EC2 proxy host that can be whitelisted on the payment gateway application side

**Answer:** C

**NEW QUESTION 152**

A Solutions Architect must migrate an existing on-premises web application with 70 TB of static files supporting a public open-data initiative. The architect wants to upgrade to the latest version of the host operating system as part of the migration effort.

Which is the FASTEST and MOST cost-effective way to perform the migration?

- A. Run a physical-to-virtual conversion on the application server

- B. Transfer the server image over the internet, and transfer the static data to Amazon S3.
- C. Run a physical-to-virtual conversion on the application server
- D. Transfer the server image over AWS Direct Connect, and transfer the static data to Amazon S3.
- E. Re-platform the server to Amazon EC2, and use AWS Snowball to transfer the static data to Amazon S3.
- F. Re-platform the server by using the AWS Server Migration Service to move the code and data to a new Amazon EC2 instance.

**Answer:** C

#### NEW QUESTION 157

A Solutions Architect is designing the storage layer for a data warehousing application. The data files are large, but they have statically placed metadata at the beginning of each file that describes the size and placement of the file's index. The data files are read in by a fleet of Amazon EC2 instances that store the index size, index location, and other category information about the data file in a database. That database is used by Amazon EMR to group files together for deeper analysis.

What would be the MOST cost-effective, high availability storage solution for this workflow?

- A. Store the data files in Amazon S3 and use Range GET for each file's metadata, then index the relevant data.
- B. Store the data files in Amazon EFS mounted by the EC2 fleet and EMR nodes.
- C. Store the data files on Amazon EBS volumes and allow the EC2 fleet and EMR to mount and unmount the volumes where they are needed.
- D. Store the content of the data files in Amazon DynamoDB tables with the metadata, index, and data as their own keys.

**Answer:** A

#### Explanation:

<https://docs.aws.amazon.com/AmazonS3/latest/API/RESTObjectGET.html>

#### NEW QUESTION 159

A company wants to replace its call system with a solution built using AWS managed services. The company call center would like the solution to receive calls, create contact flows, and scale to handle growth projections. The call center would also like the solution to use deep learning capabilities to recognize the intent of the callers and handle basic tasks, reducing the need to speak an agent. The solution should also be able to query business applications and provide relevant information back to calls as requested.

Which services should the Solution Architect use to build this solution? (Choose three.)

- A. Amazon Rekognition to identify who is calling.
- B. Amazon Connect to create a cloud-based contact center.
- C. Amazon Alexa for Business to build conversational interface.
- D. AWS Lambda to integrate with internal systems.
- E. Amazon Lex to recognize the intent of the caller.
- F. Amazon SQS to add incoming callers to a queue.

**Answer:** BDE

#### NEW QUESTION 161

A company is planning to migrate an application from on-premises to AWS. The application currently uses an Oracle database and the company can tolerate a brief downtime of 1 hour when performing the switch to the new infrastructure. As part of the migration, the database engine will be changed to MySQL. A Solutions Architect needs to determine which AWS services can be used to perform the migration while minimizing the amount of work and time required. Which of the following will meet the requirements?

- A. Use AWS SCT to generate the schema scripts and apply them on the target prior to migration
- B. Use AWS DMS to analyse the current schema and provide a recommendation for the optimal database engine
- C. Then, use AWS DMS to migrate to the recommended engine
- D. Use AWS SCT to identify what embedded SQL code in the application can be converted and what has to be done manually.
- E. Use AWS SCT to generate the schema scripts and apply them on the target prior to migration
- F. Use AWS DMS to begin moving data from the on-premises database to AWS
- G. After the initial copy, continue to use AWS DMS to keep the databases in sync until cutting over to the new databases
- H. Use AWS SCT to identify what embedded SQL code in the application can be converted and what has to be done manually.
- I. Use AWS DMS to help identify the best target deployment between installing the database engine on Amazon EC2 directly or moving to Amazon RDS
- J. Then, use AWS DMS to migrate to the platform
- K. Use AWS Application Discovery Service to identify what embedded SQL code in the application can be converted and what has to be done manually.
- L. Use AWS DMS to begin moving data from the on-premises database to AWS
- M. After the initial copy, continue to use AWS DMS to keep the databases in sync until cutting over to the new databases
- N. Use AWS Application Discovery Service to identify what embedded SQL code in the application can be converted and what has to be done manually.

**Answer:** B

#### NEW QUESTION 165

A company plans to move regulated and security-sensitive businesses to AWS. The Security team is developing a framework to validate the adoption of AWS best practice and industry-recognized compliance standards. The AWS Management Console is the preferred method for teams to provision resources.

Which strategies should a Solutions Architect use to meet the business requirements and continuously assess, audit, and monitor the configurations of AWS resources? (Choose two.)

- A. Use AWS Config rules to periodically audit changes to AWS resources and monitor the compliance of the configuration
- B. Develop AWS Config custom rules using AWS Lambda to establish a test-driven development approach, and further automate the evaluation of configuration changes against the required controls.
- C. Use Amazon CloudWatch Logs agent to collect all the AWS SDK logs
- D. Search the log data using a pre-defined set of filter patterns that machines mutating API calls
- E. Send notifications using Amazon CloudWatch alarms when unintended changes are performed
- F. Archive log data by using a batch export to Amazon S3 and then Amazon Glacier for a long-term retention and auditability.
- G. Use AWS CloudTrail events to assess management activities of all AWS accounts
- H. Ensure that CloudTrail is enabled in all accounts and available AWS services

- I. Enable trails, encrypt CloudTrail event log files with an AWS KMS key, and monitor recorded activities with CloudWatch Logs.
- J. Use the Amazon CloudWatch Events near-real-time capabilities to monitor system events patterns, and trigger AWS Lambda functions to automatically revert non-authorized changes in AWS resource
- K. Also, target Amazon SNS topics to enable notifications and improve the response time of incident responses.
- L. Use CloudTrail integration with Amazon SNS to automatically notify unauthorized API activities. Ensure that CloudTrail is enabled in all accounts and available AWS service
- M. Evaluate the usage of Lambda functions to automatically revert non-authorized changes in AWS resources.

**Answer:** AC

**Explanation:**

<https://docs.aws.amazon.com/awsccloudtrail/latest/userguide/cloudwatch-alarms-for-cloudtrail.html>

[https://docs.aws.amazon.com/en\\_pv/awsccloudtrail/latest/userguide/best-practices-security.html](https://docs.aws.amazon.com/en_pv/awsccloudtrail/latest/userguide/best-practices-security.html)

**NEW QUESTION 170**

An organization has a write-intensive mobile application that uses Amazon API Gateway, AWS Lambda, and Amazon DynamoDB. The application has scaled well, however, costs have increased exponentially because of higher than anticipated Lambda costs. The application's use is unpredictable, but there has been a steady 20% increase in utilization every month.

While monitoring the current Lambda functions, the Solutions Architect notices that the execution-time averages 4.5 minutes. Most of the wait time is the result of a high-latency network call to a 3-TB MySQL database server that is on-premises. A VPN is used to connect to the VPC, so the Lambda functions have been configured with a five-minute timeout.

How can the Solutions Architect reduce the cost of the current architecture?

- A. Replace the VPN with AWS Direct Connect to reduce the network latency to the on-premises MySQL database. Enable local caching in the mobile application to reduce the Lambda function invocation calls. Monitor the Lambda function performance; gradually adjust the timeout and memory properties to lower values while maintaining an acceptable execution time. Offload the frequently accessed records from DynamoDB to Amazon ElastiCache.
- B. Replace the VPN with AWS Direct Connect to reduce the network latency to the on-premises MySQL database. Cache the API Gateway results to Amazon CloudFront. Use Amazon EC2 Reserved Instances instead of Lambda. Enable Auto Scaling on EC2, and use Spot Instances during peak times. Enable DynamoDB Auto Scaling to manage target utilization.
- C. Migrate the MySQL database server into a Multi-AZ Amazon RDS for MySQL. Enable caching of the Amazon API Gateway results in Amazon CloudFront to reduce the number of Lambda function invocations. Monitor the Lambda function performance; gradually adjust the timeout and memory properties to lower values while maintaining an acceptable execution time. Enable DynamoDB Accelerator for frequently accessed records, and enable the DynamoDB Auto Scaling feature.
- D. Migrate the MySQL database server into a Multi-AZ Amazon RDS for MySQL. Enable API caching on API Gateway to reduce the number of Lambda function invocations. Continue to monitor the AWS Lambda function performance; gradually adjust the timeout and memory properties to lower values while maintaining an acceptable execution time. Enable Auto Scaling in DynamoDB.

**Answer:** D

**NEW QUESTION 173**

A company is currently using AWS CodeCommit for its source control and AWS CodePipeline for continuous integration. The pipeline has a build stage for building the artifacts which is then staged in an Amazon S3 bucket.

The company has identified various improvement opportunities in the existing process, and a Solutions Architect has been given the following requirement:

- Create a new pipeline to support feature development
- Support feature development without impacting production applications
- Incorporate continuous testing with unit tests
- Isolate development and production artifacts
- Support the capability to merge tested code into production code. How should the Solutions Architect achieve these requirements?

- A. Trigger a separate pipeline from CodeCommit feature branche
- B. Use AWS CodeBuild for running unit test
- C. Use CodeBuild to stage the artifacts within an S3 bucket in a separate testing account.
- D. Trigger a separate pipeline from CodeCommit feature branche
- E. Use AWS Lambda for running unit test
- F. Use AWS CodeDeploy to stage the artifacts within an S3 bucket in a separate testing account.
- G. Trigger a separate pipeline from CodeCommit tags Use Jenkins for running unit test
- H. Create a stage in the pipeline with S3 as the target for staging the artifacts with an S3 bucket in a separate testing account.
- I. Create a separate CodeCommit repository for feature development and use it to trigger the pipelin
- J. Use AWS Lambda for running unit test
- K. Use AWS CodeBuild to stage the artifacts within different S3 buckets in the same production account.

**Answer:** A

**Explanation:**

<https://docs.aws.amazon.com/codebuild/latest/userguide/how-to-create-pipeline.html>

**NEW QUESTION 178**

A company has decided to move some workloads onto AWS to create a grid environment to run market analytics. The grid will consist of many similar instances, spun-up by a job-scheduling function. Each time a large analytics workload is completed, a new VPC is deployed along with job scheduler and grid nodes. Multiple grids could be running in parallel.

Key requirements are:

- Grid instances must communicate with Amazon S3 retrieve data to be processed.
- Grid instances must communicate with Amazon DynamoDB to track intermediate data,
- The job scheduler need only to communicate with the Amazon EC2 API to start new grid nodes.

A key requirement is that the environment has no access to the internet, either directly or via the on-premises proxy. However, the application needs to be able to seamlessly communicate to Amazon S3, Amazon DynamoDB, and Amazon EC2 API, without the need for reconfiguration for each new deployment.

Which of the following should the Solutions Architect do to achieve this target architecture? (Choose three.)

- A. Enable VPC endpoints for Amazon S3 and DynamoDB.
- B. Disable Private DNS Name Support.
- C. Configure the application on the grid instances to use the private DNS name of the Amazon S3 endpoint.
- D. Populate the on-premises DNS server with the private IP addresses of the EC2 endpoint.
- E. Enable an interface VPC endpoint for EC2.
- F. Configure Amazon S3 endpoint policy to permit access only from the grid nodes.

**Answer:** ACE

**Explanation:**

<https://aws.amazon.com/premiumsupport/knowledge-center/connect-s3-vpc-endpoint/> <https://docs.aws.amazon.com/vpc/latest/userguide/vpce-interface.html>

#### NEW QUESTION 182

To abide by industry regulations, a Solutions Architect must design a solution that will store a company's critical data in multiple public AWS Regions, including in the United States, where the company's headquarters is located. The Solutions Architect is required to provide access to the data stored in AWS to the company's global WAN network. The Security team mandates that no traffic accessing this data should traverse the public internet. How should the Solutions Architect design a highly available solution that meets the requirements and is cost-effective?

- A. Establish AWS Direct Connect connections from the company headquarters to all AWS Regions in use. Use the company WAN to send traffic over to the headquarters and then to the respective DX connection to access the data.
- B. Establish two AWS Direct Connect connections from the company headquarters to an AWS Region. Use the company WAN to send traffic over a DX connection.
- C. Use inter-region VPC peering to access the data in other AWS Regions.
- D. Establish two AWS Direct Connect connections from the company headquarters to an AWS Region. Use the company WAN to send traffic over a DX connection.
- E. Use an AWS transit VPC solution to access data in other AWS Regions.
- F. Establish two AWS Direct Connect connections from the company headquarters to an AWS Region. Use the company WAN to send traffic over a DX connection.
- G. Use Direct Connect Gateway to access data in other AWS Regions.

**Answer:** D

**Explanation:**

<https://aws.amazon.com/blogs/aws/new-aws-direct-connect-gateway-inter-region-vpc-access/>

#### NEW QUESTION 186

A Solutions Architect is working with a company that operates a standard three-tier web application in AWS. The web and application tiers run on Amazon EC2 and the database tier runs on Amazon RDS. The company is redesigning the web and application tiers to use Amazon API Gateway and AWS Lambda, and the company intends to deploy the new application within 6 months. The IT Manager has asked the Solutions Architect to reduce costs in the interim. Which solution will be MOST cost effective while maintaining reliability?

- A. Use Spot Instances for the web tier, On-Demand Instances for the application tier, and Reserved Instances for the database tier.
- B. Use On-Demand Instances for the web and application tiers, and Reserved Instances for the database tier.
- C. Use Spot Instances for the web and application tiers, and Reserved Instances for the database tier.
- D. Use Reserved Instances for the web, application, and database tiers.

**Answer:** B

#### NEW QUESTION 187

An online retailer needs to regularly process large product catalogs, which are handled in batches. These are sent out to be processed by people using the Amazon Mechanical Turk service, but the retailer has asked its Solutions Architect to design a workflow orchestration system that allows it to handle multiple concurrent Mechanical Turk operations, deal with the result assessment process, and reprocess failures.

Which of the following options gives the retailer the ability to interrogate the state of every workflow with the LEAST amount of implementation effort?

- A. Trigger Amazon CloudWatch alarms based upon message visibility in multiple Amazon SQS queues (one queue per workflow stage) and send messages via Amazon SNS to trigger AWS Lambda functions to process the next step.
- B. Use Amazon ES and Kibana to visualize Lambda processing logs to see the workflow states.
- C. Hold workflow information in an Amazon RDS instance with AWS Lambda functions polling RDS for status change.
- D. Worker Lambda functions then process the next workflow step.
- E. Amazon QuickSight will visualize workflow states directly out of Amazon RDS.
- F. Build the workflow in AWS Step Functions, using it to orchestrate multiple concurrent workflow.
- G. The status of each workflow can be visualized in the AWS Management Console, and historical data can be written to Amazon S3 and visualized using Amazon QuickSight.
- H. Use Amazon SWF to create a workflow that handles a single batch of catalog records with multiple worker tasks to extract the data, transform it, and send it through Mechanical Turk.
- I. Use Amazon ES and Kibana to visualize AWS Lambda processing logs to see the workflow states.

**Answer:** C

**Explanation:**

AWS Step Functions is a fully managed service that makes it easy to coordinate the components of distributed applications and microservices using visual workflows. Instead of writing a Decider program, you define state machines in JSON. AWS customers should consider using Step Functions for new applications. If Step Functions does not fit your needs, then you should consider Amazon Simple Workflow (SWF). Amazon SWF provides you complete control over your orchestration logic, but increases the complexity of developing applications. You may write decider programs in the programming language of your choice, or you may use the Flow framework to use programming constructs that structure asynchronous interactions for you. AWS will continue to provide the Amazon SWF service, Flow framework, and support all Amazon SWF customers. <https://aws.amazon.com/swf/faqs/>

#### NEW QUESTION 191

A company is finalizing the architecture for its backup solution for applications running on AWS. All of the applications run on AWS and use at least two Availability Zones in each tier.

Company policy requires IT to durably store nightly backups for all its data in at least two locations: production and disaster recovery. The locations must be in different geographic regions. The company also needs the backup to be available to restore immediately at the production data center, and within 24 hours at the disaster recovery location. All backup processes must be fully automated.

What is the MOST cost-effective backup solution that will meet all requirements?

- A. Back up all the data to a large Amazon EBS volume attached to the backup media server in the production regio
- B. Run automated scripts to snapshot these volumes nightly, and copy these snapshots to the disaster recovery region.
- C. Back up all the data to Amazon S3 in the disaster recovery regio
- D. Use a lifecycle policy to move this data to Amazon Glacier in the production region immediatel
- E. Only the data is replicated; remove the data from the S3 bucket in the disaster recovery region.
- F. Back up all the data to Amazon Glacier in the production regio
- G. Set up cross-region replication of this data to Amazon Glacier in the disaster recovery regio
- H. Set up a lifecycle policy to delete any data older than 60 days.
- I. Back up all the data to Amazon S3 in the production regio
- J. Set up cross-region replication of this S3 bucket to another region and set up a lifecycle policy in the second region to immediately move this data to Amazon Glacier.

**Answer: D**

#### NEW QUESTION 194

A financial services company is moving to AWS and wants to enable Developers to experiment and innovate while preventing access to production applications The company has the following requirements

- Production workloads cannot be directly connected to the internet
- All workloads must be restricted to the us-west-2 and eu-central-1 Regions
- Notification should be sent when Developer sandboxes exceed \$500 in AWS spending monthly

Which combination of actions needs to be taken to create a multi-account structure that meets the company's requirements'? (Select THREE )

- A. Create accounts for each production workload within an organization in AWS Organizations Place the production accounts within an organizational unit (OU) For each account delete the default VPC Create an SCP with a Deny rule for the attach an internet gateway and create a default VPC actions Attach the SCP to the OU for the production accounts
- B. Create accounts for each production workload within an organization in AWS Organizations Place the production accounts within an organizational unit (OU) Create an SCP with a Deny rule on the attach an internet gateway action Create an SCP with a Deny rule to prevent use of the default VPC Attach the SCPs to the OU for the production accounts
- C. Create a SCP containing a Deny Effect for cloudfront". lam:\*, route53\* and support\* with a StringNotEquals condition on an aws RequestedRegion condition key with us-west-2 and eu-central-1 values Attach the SCP to the organization's root.
- D. Create an IAM permission boundary containing a Deny Effect for cloudfront'. lam \* route53' and support" with a StringNotEquals condition on an aws RequestedRegion condition key with us-west 2 and eu-central-1 values Attach the permission boundary to an IAM group containing the development and production users.
- E. Create accounts for each development workload within an organization m AWS Organizations Place the development accounts within an organizational unit (OU) Create a custom AWS Config rule to deactivate all (AM users when an account's monthly bill exceeds \$500.
- F. Create accounts for each development workload within an organization in AWS Organizations Place the development accounts within an organizational unit (OU) Create a budget within AWS Budgets for each development account to monitor and report on monthly spending exceeding \$500.

**Answer: ABD**

#### NEW QUESTION 195

A utility company wants to collect usage data every 5 minutes from its smart meters to facilitate time-of-use metering When a meter sends data to AWS the data is sent to Amazon API Gateway, processed by an AWS Lambda function and stored in an Amazon DynamoDB table During the pilot phase, the Lambda functions took from 3 to 5 seconds to complete

As more smart meters are deployed, the Engineers notice the Lambda functions are taking from 1 to 2 minutes to complete The functions are also increasing in duration as new types of metrics are collected from the devices There are many ProvisionedThroughputExceededException errors while performing PUT operations on DynamoDB and there are also many TooManyRequests Exception errors from Lambda.

Which combination of changes will resolve these issues? (Select TWO )

- A. increase the write capacity units to the DynamoDB table
- B. Increase the memory available to the Lambda functions
- C. Increase the payload size from the smart meters to send more data
- D. Stream the data into an Amazon Kinesis data stream from API Gateway and process the data in batches
- E. Collect data in an Amazon SQS FIFO queue, which triggers a Lambda function to process each message

**Answer: AB**

#### NEW QUESTION 198

A company is running a web application with On-Demand Amazon EC2 instances in Auto Scaling groups that scale dynamically based on custom metrics After extensive testing the company determines that the m5 2xlarge instance size is optimal for the workload Application data is stored in db r4 4xlarge Amazon RDS instances that are confirmed to be optimal The traffic to the web application spikes randomly during the day

What other cost-optimization methods should the company implement to further reduce costs without impacting the reliability of the application?

- A. Double the instance count in the Auto Scaling groups and reduce the instance size to m5 large
- B. Reserve capacity for the RDS database and the minimum number of EC2 instances that are constantly running
- C. Reduce the RDS instance size to db r4 xlarge and add five equivalents sized read replicas to provide reliability
- D. Reserve capacity for all EC2 instances and leverage Spot Instance pricing for the RDS database

**Answer: B**

#### NEW QUESTION 199

A company currently runs a secure application on Amazon EC2 that takes files from on-premises locations through AWS Direct Connect, processes them, and uploads them to a single Amazon S3 bucket. The application uses HTTPS for encryption in transit to Amazon S3, and S3 server-side encryption to encrypt at rest. Which of the following changes should the Solutions Architect recommend to make this solution more secure without impeding application's performance?

- A. Add a NAT gateway
- B. Update the security groups on the EC2 instance to allow access to and from the S3 IP range only
- C. Configure an S3 bucket policy that allows communication from the NAT gateway's Elastic IP address only.
- D. Add a VPC endpoint
- E. Configure endpoint policies on the VPC endpoint to allow access to the required Amazon S3 buckets only
- F. Implement an S3 bucket policy that allows communication from the VPC's source IP range only.
- G. Add a NAT gateway
- H. Update the security groups on the EC2 instance to allow access to and from the S3 IP range only
- I. Configure an S3 bucket policy that allows communication from the source public IP address of the on-premises network only.
- J. Add a VPC endpoint
- K. Configure endpoint policies on the VPC endpoint to allow access to the required S3 buckets only
- L. Implement an S3 bucket policy that allows communication from the VPC endpoint only.

**Answer:** D

**Explanation:**

<https://docs.aws.amazon.com/AmazonS3/latest/dev/example-bucket-policies-vpc-endpoint.html>

**NEW QUESTION 203**

A company is running a high-user-volume media-sharing application on premises. It currently hosts about 400 TB of data with millions of video files. The company is migrating this application to AWS to improve reliability and reduce costs.

The Solutions Architecture team plans to store the videos in an Amazon S3 bucket and use Amazon CloudFront to distribute videos to users. The company needs to migrate this application to AWS within 10 days with the least amount of downtime possible. The company currently has 1 Gbps connectivity to the internet with 30 percent free capacity.

Which of the following solutions would enable the company to migrate the workload to AWS and meet all of the requirements?

- A. Use a multipart upload in Amazon S3 client to parallel-upload the data to the Amazon S3 bucket over the internet. Use the throttling feature to ensure that the Amazon S3 client does not use more than 30 percent of available internet capacity.
- B. Request an AWS Snowmobile with 1 PB capacity to be delivered to the data center. Load the data into Snowmobile and send it back to have AWS download that data to the Amazon S3 bucket. Sync the new data that was generated while migration was in flight.
- C. Use an Amazon S3 client to transfer data from the data center to the Amazon S3 bucket over the internet. Use the throttling feature to ensure the Amazon S3 client does not use more than 30 percent of available internet capacity.
- D. Request multiple AWS Snowball devices to be delivered to the data center. Load the data concurrently into these devices and send it back. Have AWS download that data to the Amazon S3 bucket. Sync the new data that was generated while migration was in flight.

**Answer:** D

**Explanation:**

<https://www.edureka.co/blog/aws-snowball-and-snowmobile-tutorial/>

**NEW QUESTION 205**

A company has asked a Solutions Architect to design a secure content management solution that can be accessed by API calls by external customer applications. The company requires that a customer administrator must be able to submit an API call and roll back changes to existing files sent to the content management solution, as needed.

What is the MOST secure deployment design that meets all solution requirements?

- A. Use Amazon S3 for object storage with versioning and bucket access logging enabled, and an IAM role and access policy for each customer application.
- B. Encrypt objects using SSE-KM.
- C. Develop the content management application to use a separate AWS KMS key for each customer.
- D. Use Amazon WorkDocs for object storage.
- E. Leverage WorkDocs encryption, user access management, and version control.
- F. Use AWS CloudTrail to log all SDK actions and create reports of hourly access by using the Amazon CloudWatch dashboard.
- G. Enable a revert function in the SDK based on a static Amazon S3 webpage that shows the output of the CloudWatch dashboard.
- H. Use Amazon EFS for object storage, using encryption at rest for the Amazon EFS volume and a customer managed key stored in AWS KMS.
- I. Use IAM roles and Amazon EFS access policies to specify separate encryption keys for each customer application.
- J. Deploy the content management application to store all new versions as new files in Amazon EFS and use a control API to revert a specific file to a previous version.
- K. Use Amazon S3 for object storage with versioning and enable S3 bucket access logging.
- L. Use an IAM role and access policy for each customer application.
- M. Encrypt objects using client-side encryption, and distribute an encryption key to all customers when accessing the content management application.

**Answer:** A

**NEW QUESTION 209**

A company has an application behind a load balancer with enough Amazon EC2 instances to satisfy peak demand. Scripts and third-party deployment solutions are used to configure EC2 instances when demand increases or an instance fails. The team must periodically evaluate the utilization of the instance types to ensure that the correct sizes are deployed.

How can this workload be optimized to meet these requirements?

- A. Use CloudFormation to create AWS CloudFormation stacks from the current resource.
- B. Deploy that stack by using AWS CloudFormation in the same region.
- C. Use Amazon CloudWatch alarms to send notifications about underutilized resources to provide cost-savings suggestions.
- D. Create an Auto Scaling group to scale the instances, and use AWS CodeDeploy to perform the configuration.
- E. Change from a load balancer to an Application Load Balance.
- F. Purchase a third-party product that provides suggestions for cost savings on AWS resources.
- G. Deploy the application by using AWS Elastic Beanstalk with default options.
- H. Register for an AWS Support Developer plan.
- I. Review the instance usage for the application by using Amazon CloudWatch, and identify less expensive instances that can handle the load.
- J. Hold monthly meetings to review new instance types and determine whether Reserved instances should be purchased.
- K. Deploy the application as a Docker image by using Amazon EC2.

- L. Set up Amazon EC2 Auto Scaling and Amazon ECS scalin
- M. Register for AWS Business Support and use Trusted Advisor checks to provide suggestions on cost savings.

**Answer:** D

**NEW QUESTION 211**

.....

## THANKS FOR TRYING THE DEMO OF OUR PRODUCT

Visit Our Site to Purchase the Full Set of Actual SAP-C01 Exam Questions With Answers.

We Also Provide Practice Exam Software That Simulates Real Exam Environment And Has Many Self-Assessment Features. Order the SAP-C01 Product From:

<https://www.2passeasy.com/dumps/SAP-C01/>

### Money Back Guarantee

#### **SAP-C01 Practice Exam Features:**

- \* SAP-C01 Questions and Answers Updated Frequently
- \* SAP-C01 Practice Questions Verified by Expert Senior Certified Staff
- \* SAP-C01 Most Realistic Questions that Guarantee you a Pass on Your FirstTry
- \* SAP-C01 Practice Test Questions in Multiple Choice Formats and Updatesfor 1 Year