

# Amazon-Web-Services

## Exam Questions SAP-C01

AWS Certified Solutions Architect- Professional



#### NEW QUESTION 1

A company receives clickstream data files to Amazon S3 every five minutes. A Python script runs as a cron job once a day on an Amazon EC2 instance to process each file and load it into a database hosted on Amazon RDS. The cron job takes 15 to 30 minutes to process 24 hours of data. The data consumers ask for the data be available as soon as possible.

Which solution would accomplish the desired outcome?

- A. Increase the size of the instance to speed up processing and update the schedule to run once an hour.
- B. Convert the cron job to an AWS Lambda function and trigger this new function using a cron job on an EC2 instance.
- C. Convert the cron job to an AWS Lambda function and schedule it to run once an hour using Amazon CloudWatch events.
- D. Create an AWS Lambda function that runs when a file is delivered to Amazon S3 using S3 event notifications.

**Answer:** D

#### Explanation:

<https://docs.aws.amazon.com/lambda/latest/dg/with-s3.html>

#### NEW QUESTION 2

A retail company processes point-of-state data on application servers in its data center and writes outputs to Amazon DynamoDB table. The data center is connected to the company's VPC with an AWS Direct Connect (DX) connection, and the application servers require a consistent network connection at speed greater than 2 Gbps.

The company decides that the DynamoDB table needs to be highly available and fault tolerant. The company policy states that the data should be available across two regions.

What changes should the company make to meet these requirements?

- A. Establish a second DX connection for redundancy
- B. Use DynamoDB global tables to replicate data to a second Region modify the application to fail over to the second Region.
- C. Use an AWS managed VPN as a backup to D
- D. Create an identical DynamoDB table in a second Region
- E. Modify the application to replicate data to both regions.
- F. Establish a second DX connection for redundancy
- G. Create an identical DynamoDB table in a second Region
- H. Enable DynamoDB auto scaling to manage throughput capacity
- I. Modify the application to write to the second Region.
- J. Use AWS managed VPN as a backup to D
- K. Create an identical DynamoDB table in a second Region. Enable DynamoDB streams to capture changes to the table
- L. Use AWS Lambda to replicate changes to the second Region.

**Answer:** A

#### NEW QUESTION 3

An organization has two Amazon EC2 instances:

- The first is running an ordering application and an inventory application.
- The second is running a queuing system.

During certain times of the year, several thousand orders are placed per second. Some orders were lost when the queuing system was down. Also, the organization's inventory application has the incorrect quantity of products because some orders were processed twice.

What should be done to ensure that the applications can handle the increasing number of orders?

- A. Put the ordering and inventory applications into their own AWS Lambda function
- B. Have the ordering application write the messages into an Amazon SQS FIFO queue.
- C. Put the ordering and inventory applications into their own Amazon ECS containers and create an Auto Scaling group for each application
- D. Then, deploy the message queuing server in multiple Availability Zones.
- E. Put the ordering and inventory applications into their own Amazon EC2 instances, and create an Auto Scaling group for each application
- F. Use Amazon SQS standard queues for the incoming orders, and implement idempotency in the inventory application.
- G. Put the ordering and inventory applications into their own Amazon EC2 instance
- H. Write the incoming orders to an Amazon Kinesis data stream Configure AWS Lambda to poll the stream and update the inventory application.

**Answer:** C

#### Explanation:

<https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/standard-queues.html>

#### NEW QUESTION 4

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

- 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 5**

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.

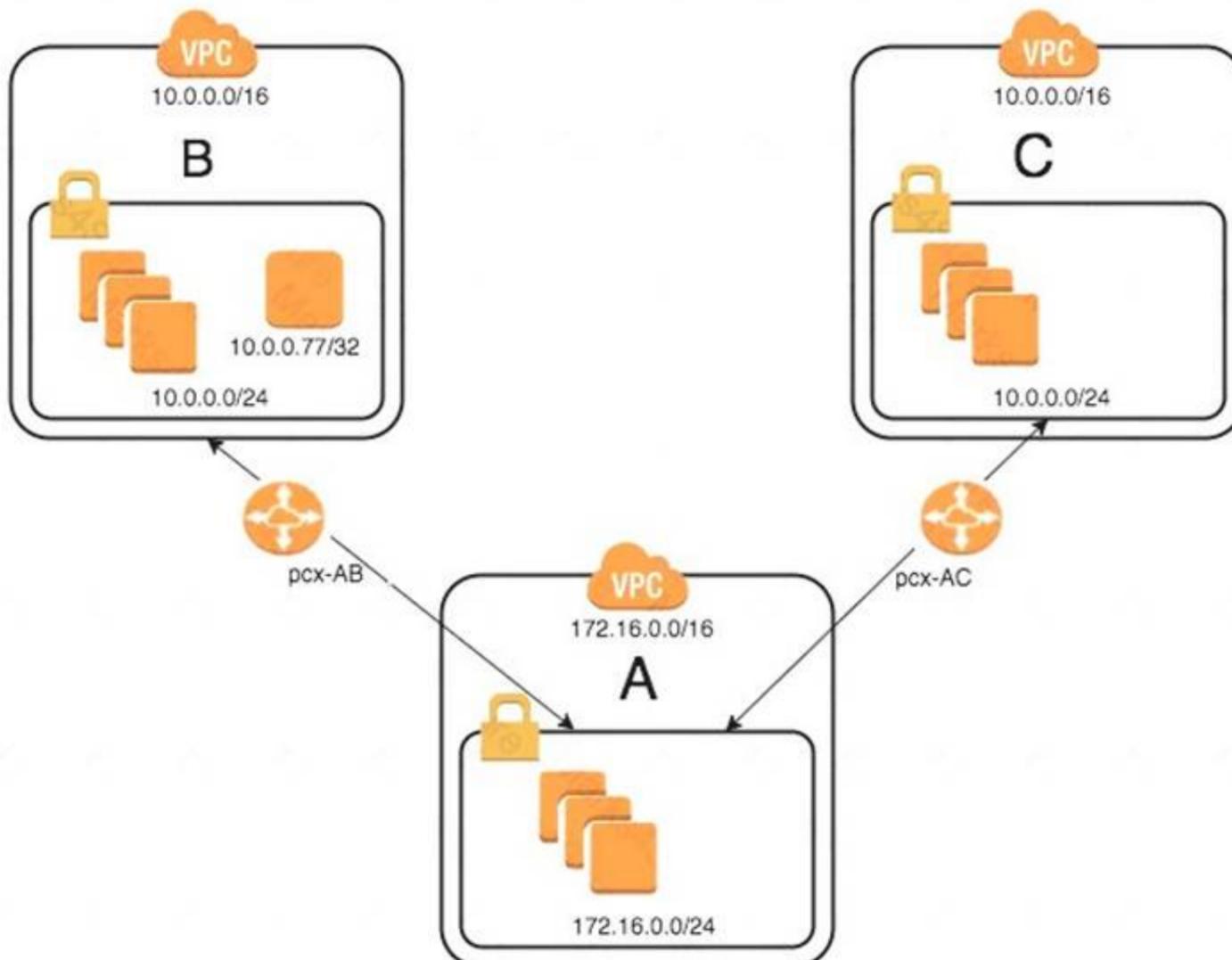
Which design would provide a reliable connection to the backend API?

- 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 6**

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 7

A company runs a memory-intensive analytics application using on-demand Amazon EC2 compute optimized instance. The application is used continuously and application demand doubles during working hours. The application currently scales based on CPU usage. When scaling in occurs, a lifecycle hook is used because the instance requires 4 minutes to clean the application state before terminating.

Because users reported poor performance during working hours, scheduled scaling actions were implemented so additional instances would be added during working hours. The Solutions Architect has been asked to reduce the cost of the application.

Which solution is MOST cost-effective?

- A. Use the existing launch configuration that uses C5 instances, and update the application AMI to include the Amazon CloudWatch agent
- B. Change the Auto Scaling policies to scale based on memory utilization
- C. Use Reserved Instances for the number of instances required after working hours, and use Spot Instances to cover the increased demand during working hours.
- D. Update the existing launch configuration to use R5 instances, and update the application AMI to include SSM Agent
- E. Change the Auto Scaling policies to scale based on memory utilization
- F. Use Reserved instances for the number of instances required after working hours, and use Spot Instances with On-Demand instances to cover the increased demand during working hours.
- G. Use the existing launch configuration that uses C5 instances, and update the application AMI to include SSM Agent
- H. Leave the Auto Scaling policies to scale based on CPU utilization
- I. Use scheduled Reserved Instances for the number of instances required after working hours, and use Spot Instances to cover the increased demand during work hours.
- J. Create a new launch configuration using R5 instances, and update the application AMI to include the Amazon CloudWatch agent
- K. Change the Auto Scaling policies to scale based on memory utilization
- L. Use Reserved Instances for the number of instances required after working hours, and use Standard Reserved Instances with On-Demand Instances to cover the increased demand during working hours.

**Answer: D**

#### Explanation:

[https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/monitoring\\_ec2.html](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/monitoring_ec2.html)

#### NEW QUESTION 8

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 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

A company would like to implement a serverless application by using Amazon API Gateway, AWS Lambda, and Amazon DynamoDB. They deployed a proof of concept and stated that the average response time is greater than what their upstream services can accept. Amazon CloudWatch metrics did not indicate any issues with DynamoDB but showed that some Lambda functions were hitting their timeout.

Which of the following actions should the Solutions Architect consider to improve performance? (Choose two.)

- A. Configure the AWS Lambda function to reuse containers to avoid unnecessary startup time.
- B. Increase the amount of memory and adjust the timeout on the Lambda function.
- C. Complete performance testing to identify the ideal memory and timeout configuration for the Lambda function.
- D. Create an Amazon ElastiCache cluster running Memcached, and configure the Lambda function for VPC integration with access to the Amazon ElastiCache.

- cluster.
- E. Enable API cache on the appropriate stage in Amazon API Gateway, and override the TTL for individual methods that require a lower TTL than the entire stage.
  - F. Increase the amount of CPU, and adjust the timeout on the Lambda function.
  - G. Complete performance testing to identify the ideal CPU and timeout configuration for the Lambda function.

**Answer:** BD

**Explanation:**

<https://lumigo.io/blog/aws-lambda-timeout-best-practices/>

**NEW QUESTION 10**

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 15**

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 17**

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 days
- C. Use an AWS Lambda trigger to transcribe the call recordings with Amazon Transcribe
- 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 center
- F. Set up an S3 lifecycle policy to move the call recordings to Amazon S3 Glacier after 90 days
- G. Use an AWS Lambda trigger to transcribe the call recordings with Amazon Mechanical Turk
- 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 application.
- J. Upload the call recordings to this application from the call center and store them on an Amazon EFS mount point
- K. Use AWS Backup to archive the call recording after 90 days
- 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 queue
- N. Set up an S3 lifecycle policy to move the call recordings to Amazon S3 Glacier after 90 days
- O. Use Amazon EC2 instances in the queue as the scaling metric
- P. Use Amazon S3, Amazon API Gateway, and AWS Lambda to host the review and scoring application.

**Answer:** B

**NEW QUESTION 19**

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 configuration
- 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 configuration
- 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 nodes
- 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 21

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 VPCs
- C. Configure default routes to the Internet gateways for both VPCs
- 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 22

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 one stack. 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 service
- B. After the existing templates to use cross-stack references to eliminate passing many parameters to each template
- C. Call each required stack for the application as a nested stack from the new stack
- 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 service
- F. Create a product for each existing AWS CloudFormation template required to build the service
- G. Add the products to the portfolio that represents that service in AWS Service Catalog
- 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 service
- J. For each existing template, choose AWS CloudFormation as a deployment action
- K. Add the AWS CloudFormation template to the deployment action
- L. Ensure that the deployment actions are processed to make sure that dependencies are obeyed
- M. Use configuration files and scripts to share parameters between the stacks
- 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 27

A company is running an email application across multiple AWS Regions. The company uses Ohio (us-east-2) as the primary Region and Northern Virginia (us-east-1) as the Disaster Recovery (DR) Region. The data is continuously replicated from the primary Region to the DR Region by a single instance on the public subnet in both Regions. The replication messages between the Regions have a significant backlog during certain times of the day. The backlog clears on its own after a short time, but it affects the application's RPO.

Which of the following solutions should help remediate this performance problem? (Select TWO)

- A. Increase the size of the instances.
- B. Have the instance in the primary Region write the data to an Amazon SQS queue in the primary Region instead, and have the instance in the DR Region poll from this queue.
- C. Use multiple instances on the primary and DR Regions to send and receive the replication data.
- D. Change the DR Region to Oregon (us-west-2) instead of the current DR Region.
- E. Attach an additional elastic network interface to each of the instances in both Regions and set up load balancing between the network interfaces.

**Answer:** AC

**NEW QUESTION 31**

A company runs a public-facing application that uses a Java-based web service via a RESTful API. It is hosted on Apache Tomcat on a single server in a data center that runs consistently at 30% CPU utilization. Use of the API is expected to increase by 10 times with a new product launch. The business wants to migrate the application to AWS with no disruption and needs it to scale to meet demand. The company has already decided to use Amazon Route 53 and CNAME records to redirect traffic. How can these requirements be met with the LEAST amount of effort?

- A. Use AWS Elastic Beanstalk to deploy the Java web service and enable Auto Scaling. Then switch the application to use the new web service.
- B. Lift and shift the Apache server to the cloud using AWS SMS. Then switch the application to direct web service traffic to the new instance.
- C. Create a Docker image and migrate the image to Amazon ECS. Then change the application code to direct web service queries to the ECS container.
- D. Modify the application to call the web service via Amazon API Gateway. Then create a new AWS Lambda Java function to run the Java web service code. After testing, change API Gateway to use the Lambda function.

**Answer:** A

**NEW QUESTION 34**

A company runs a three-tier application in AWS. Users report that the application performance can vary greatly depending on the time of day and functionality being accessed.

The application includes the following components:

- Eight t2.large front-end web servers that serve static content and proxy dynamic content from the application tier.
- Four t2.large application servers.
- One db.m4.large Amazon RDS MySQL Multi-AZ DB instance.

Operations has determined that the web and application tiers are network constrained.

Which of the following should cost effectively improve application performance? (Choose two.)

- A. Replace web and app tiers with t2.xlarge instances.
- B. Use AWS Auto Scaling and m4.large instances for the web and application tiers.
- C. Convert the MySQL RDS instance to a self-managed MySQL cluster on Amazon EC2.
- D. Create an Amazon CloudFront distribution to cache content.
- E. Increase the size of the Amazon RDS instance to db.m4.xlarge.

**Answer:** BD

**Explanation:**

<https://aws.amazon.com/ec2/instance-types/>

**NEW QUESTION 39**

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 accounts.
- 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 42**

A company has multiple AWS accounts hosting IT applications. An Amazon CloudWatch Logs agent is installed on all Amazon EC2 instances. The company wants to aggregate all security events in a centralized AWS account dedicated to log storage. Security Administrators need to perform near-real-time gathering and correlating of events across multiple AWS accounts. Which solution satisfies these requirements?

- A. Create a Log Audit IAM role in each application AWS account with permissions to view CloudWatch Logs, configure an AWS Lambda function to assume the Log Audit role, and perform an hourly export of CloudWatch Logs data to an Amazon S3 bucket in the logging AWS account.
- B. Configure CloudWatch Logs streams in each application AWS account to forward events to CloudWatch Logs in the logging AWS account.
- C. In the logging AWS account, subscribe an Amazon Kinesis Data Firehose stream to Amazon CloudWatch Events, and use the stream to persist log data in Amazon S3.
- D. Create Amazon Kinesis Data Streams in the logging account, subscribe the stream to CloudWatch Logs streams in each application AWS account, configure an Amazon Kinesis Data Firehose delivery stream with the Data Streams as its source, and persist the log data in an Amazon S3 bucket inside the logging AWS account.
- E. Configure CloudWatch Logs agents to publish data to an Amazon Kinesis Data Firehose stream in the logging AWS account, use an AWS Lambda function to read messages from the stream and push messages to Data Firehose, and persist the data in Amazon S3.

**Answer: C**

**Explanation:**

The solution uses Amazon Kinesis Data Streams and a log destination to set up an endpoint in the logging account to receive streamed logs and uses Amazon Kinesis Data Firehose to deliver log data to the Amazon Simple Storage Solution (S3) bucket. Application accounts will subscribe to stream all (or part) of their Amazon CloudWatch logs to a defined destination in the logging account via subscription filters. <https://aws.amazon.com/blogs/architecture/central-logging-in-multi-account-environments/>

**NEW QUESTION 43**

A company is migrating an application to AWS. It wants to use fully managed services as much as possible during the migration. The company needs to store large, important documents within the application with the following requirements:

- > The data must be highly durable and available.
- > The data must always be encrypted at rest and in transit.
- > The encryption key must be managed by the company and rotated periodically. Which of the following solutions should the Solutions Architect recommend?

- A. Deploy the storage gateway to AWS in file gateway mode.
- B. Use Amazon EBS volume encryption using an AWS KMS key to encrypt the storage gateway volumes.
- C. Use Amazon S3 with a bucket policy to enforce HTTPS for connections to the bucket and to enforce server-side encryption and AWS KMS for object encryption.
- D. Use Amazon DynamoDB with SSL to connect to DynamoDB.
- E. Use an AWS KMS key to encrypt DynamoDB objects at rest.
- F. Deploy instances with Amazon EBS volumes attached to store this data.
- G. Use EBS volume encryption using an AWS KMS key to encrypt the data.

**Answer: B**

**Explanation:**

<https://aws.amazon.com/blogs/security/how-to-use-bucket-policies-and-apply-defense-in-depth-to-help-secure-y>

**NEW QUESTION 47**

A company runs a dynamic mission-critical web application that has an SLA of 99.99%. Global application users access the application 24/7. The application is currently hosted on premises and routinely fails to meet its SLA, especially when millions of users access the application concurrently. Remote users complain of latency.

How should this application be redesigned to be scalable and allow for automatic failover at the lowest cost?

- A. Use Amazon Route 53 failover routing with geolocation-based routing.
- B. Host the website on automatically scaled Amazon EC2 instances behind an Application Load Balancer with an additional Application Load Balancer and EC2 instances for the application layer in each region.
- C. Use a Multi-AZ deployment with MySQL as the data layer.
- D. Use Amazon Route 53 round robin routing to distribute the load evenly to several regions with health check.
- E. Host the website on automatically scaled Amazon ECS with AWS Fargate technology containers behind a Network Load Balancer, with an additional Network Load Balancer and Fargate containers for the application layer in each region.
- F. Use Amazon Aurora replicas for the data layer.
- G. Use Amazon Route 53 latency-based routing to route to the nearest region with health check.
- H. Host the website in Amazon S3 in each region and use Amazon API Gateway with AWS Lambda for the application layer.
- I. Use Amazon DynamoDB global tables as the data layer with Amazon DynamoDB Accelerator (DAX) for caching.
- J. Use Amazon Route 53 geolocation-based routing.
- K. Host the website on automatically scaled AWS Fargate containers behind a Network Load Balancer with an additional Network Load Balancer and Fargate containers for the application layer in each region.
- L. Use Amazon Aurora Multi-Master for Aurora MySQL as the data layer.

**Answer: C**

**Explanation:**

<https://aws.amazon.com/getting-started/projects/build-serverless-web-app-lambda-apigateway-s3-dynamodb-co>

**NEW QUESTION 52**

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 deployment
- 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 configured 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 code 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 54

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 from the environment template
- D. Add a launch constraint to the product with the existing role
- E. Give users in the QA department permission to use AWS Service Catalog APIs only
- F. Train users to launch the templates from 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 from the CloudFormation console.
- I. Create an AWS Elastic Beanstalk application from the environment template
- J. Give users in the QA department permission to use Elastic Beanstalk permissions only
- 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 58

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 60

A Solutions Architect is designing the storage layer for a recently purchased application. The application will be running on Amazon EC2 instances and has the following layers and requirements:

- Data layer: A POSIX file system shared across many systems.
- Service layer: Static file content that requires block storage with more than 100k IOPS. Which combination of AWS services will meet these needs? (Choose two.)

- A. Data layer – Amazon S3
- B. Data layer – Amazon EC2 Ephemeral Storage
- C. Data layer – Amazon EFS
- D. Service layer – Amazon EBS volumes with Provisioned IOPS
- E. Service layer – Amazon EC2 Ephemeral Storage

**Answer: CE**

#### Explanation:

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/storage-optimized-instances.html>

#### NEW QUESTION 62

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 64

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 66

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 67

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 microservice
- 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 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 70**

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 73**

A company runs a video processing platform. Files are uploaded by users who connect to a web server, which stores them on an Amazon EFS share. This web server is running on a single Amazon EC2 instance. A different group of instances, running in an Auto Scaling group, scans the EFS share directory structure for new files to process and generates new videos (thumbnails, different resolution, compression, etc.) according to the instructions file, which is uploaded along with the video files. A different application running on a group of instances managed by an Auto Scaling group processes the video files and then deletes them from the EFS share. The results are stored in an S3 bucket. Links to the processed video files are emailed to the customer.

The company has recently discovered that as they add more instances to the Auto Scaling Group, many files are processed twice, so image processing speed is not improved. The maximum size of these video files is 2GB.

What should the Solutions Architect do to improve reliability and reduce the redundant processing of video files?

- A. Modify the web application to upload the video files directly to Amazon S3. Use Amazon CloudWatch Events to trigger an AWS Lambda function every time a file is uploaded, and have this Lambda function put a message into an Amazon SQS queue
- B. Modify the video processing application to read from SQS queue for new files and use the queue depth metric to scale instances in the video processing Auto Scaling group.
- C. Set up a cron job on the web server instance to synchronize the contents of the EFS share into Amazon S3. Trigger an AWS Lambda function every time a file is uploaded to process the video file and store the results in Amazon S3. Using Amazon CloudWatch Events trigger an Amazon SES job to send an email to the customer containing the link to the processed file.
- D. Rewrite the web application to run directly from Amazon S3 and use Amazon API Gateway to upload the video files to an S3 bucket
- E. Use an S3 trigger to run an AWS Lambda function each time a file is uploaded to process and store new video files in a different bucket
- F. Using CloudWatch Events, trigger an SES job to send an email to the customer containing the link to the processed file.
- G. Rewrite the web application to run from Amazon S3 and upload the video files to an S3 bucket
- H. Each time a new file is uploaded, trigger an AWS Lambda function to put a message in an SQS queue containing the link and the instruction
- I. Modify the video processing application to read from the SQS queue and the S3 bucket
- J. Use the queue depth metric to adjust the size of the Auto Scaling group for video processing instances.

**Answer: A**

**NEW QUESTION 74**

A company has a High Performance Computing (HPC) cluster in its on-premises data center which runs thousands of jobs in parallel for one week every month, processing petabytes of images. The images are stored on a network file server, which is replicated to a disaster recovery site. The on-premises data center has reached capacity and has started to spread the jobs out over the course of month in order to better utilize the cluster, causing a delay in the job completion.

The company has asked its Solutions Architect to design a cost-effective solution on AWS to scale beyond the current capacity of 5,000 cores and 10 petabytes of data. The solution must require the least amount of management overhead and maintain the current level of durability.

Which solution will meet the company's requirements?

- A. Create a container in the Amazon Elastic Container Registry with the executable file for the job
- B. Use Amazon ECS with Spot Fleet in Auto Scaling group
- C. Store the raw data in Amazon EBS SC1 volumes and write the output to Amazon S3.
- D. Create an Amazon EMR cluster with a combination of On Demand and Reserved Instance Task Nodes that will use Spark to pull data from Amazon S3. Use Amazon DynamoDB to maintain a list of jobs that need to be processed by the Amazon EMR cluster.
- E. Store the raw data in Amazon S3, and use AWS Batch with Managed Compute Environments to create Spot Fleet
- F. Submit jobs to AWS Batch Job Queues to pull down objects from Amazon S3 onto Amazon EBS volumes for temporary storage to be processed, and then write the results back to Amazon S3.
- G. Submit the list of jobs to be processed to an Amazon SQS to queue the jobs that need to be processed. Create a diversified cluster of Amazon EC2 worker instances using Spot Fleet that will automatically scale based on the queue depth

H. Use Amazon EFS to store all the data sharing it across all instances in the cluster.

**Answer: B**

**NEW QUESTION 75**

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 AW
- D. Cutover to Amazon RDS after the data is synchronized.
- E. Order an AWS Snowball device and copy a database dump to the devic
- F. After the data has been copied to Amazon S3, import it to the Amazon RDS instanc
- 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 78**

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 instanc
- B. Add a route for destination 0.0.0.0/0 pointing to the NAT instance.
- C. Enable IPv6 on the NAT gatewa
- D. Add a route for destination ::/0 pointing to the NAT gateway.
- E. Enable IPv6 on the internet gatewa
- F. Add a route for destination 0.0.0.0/0 pointing to the IGW.
- G. Create an egress-only internet gatewa
- 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 81**

A finance company is running its business-critical application on current-generation Linux EC2 instances. The application includes a self-managed MySQL database performing heavy I/O operations. The application is working fine to handle a moderate amount of traffic during the month. However, it slows down during the final three days of each month due to month-end reporting, even though the company is using Elastic Load Balancers and Auto Scaling within its infrastructure to meet the increased demand.

Which of the following actions would allow the database to handle the month-end load with the LEAST impact on performance?

- A. Pre-warming Elastic Load Balancers, using a bigger instance type, changing all Amazon EBS volumes to GP2 volumes.
- B. Performing a one-time migration of the database cluster to Amazon RDS, and creating several additional read replicas to handle the load during end of month.
- C. Using Amazon CloudWatch with AWS Lambda to change the type, size, or IOPS of Amazon EBS volumes in the cluster based on a specific CloudWatch metric.
- D. Replacing all existing Amazon EBS volumes with new PIOPS volumes that have the maximum available storage size and I/O per second by taking snapshots before the end of the month and reverting back afterwards.

**Answer: B**

**NEW QUESTION 83**

AnyCompany has acquired numerous companies over the past few years. The CIO for AnyCompany would like to keep the resources for each acquired company separate. The CIO also would like to enforce a chargeback model where each company pays for the AWS services it uses.

The Solutions Architect is tasked with designing an AWS architecture that allows AnyCompany to achieve the following:

- Implementing a detailed chargeback mechanism to ensure that each company pays for the resources it uses.
- AnyCompany can pay for AWS services for all its companies through a single invoice.
- Developers in each acquired company have access to resources in their company only.
- Developers in an acquired company should not be able to affect resources in their company only.
- A single identity store is used to authenticate Developers across all companies.

Which of the following approaches would meet these requirements? (Choose two.)

- A. Create a multi-account strategy with an account per compan
- B. Use consolidated billing to ensure that AnyCompany needs to pay a single bill only.
- C. Create a multi-account strategy with a virtual private cloud (VPC) for each compan

- D. Reduce impact across companies by not creating any VPC peering link
- E. As everything is in a single account, there will be a single invoice
- F. use tagging to create a detailed bill for each company.
- G. Create IAM users for each Developer in the account to which they require access
- H. Create policies that allow the users access to all resources in that account
- I. Attach the policies to the IAM user.
- J. Create a federated identity store against the company's Active Directory
- K. Create IAM roles with appropriate permissions and set the trust relationships with AWS and the identity store
- L. Use AWS STS to grant users access based on the groups they belong to in the identity store.
- M. Create a multi-account strategy with an account per company
- N. For billing purposes, use a tagging solution that uses a tag to identify the company that creates each resource.

**Answer:** AD

#### NEW QUESTION 84

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 85

A company manages more than 200 separate internet-facing web applications. All of the applications are deployed to AWS in a single AWS Region. The fully qualified domain names (FQDNs) of all of the applications are made available through HTTPS using Application Load Balancers (ALBs). The ALBs are configured to use public SSL/TLS certificates.

A Solutions Architect needs to migrate the web applications to a multi-region architecture. All HTTPS services should continue to work without interruption. Which approach meets these requirements?

- A. Request a certificate for each FQDN using AWS KMS
- B. Associate the certificates with the ALBs in the primary AWS Region
- C. Enable cross-region availability in AWS KMS for the certificates and associate the certificates with the ALBs in the secondary AWS Region.
- D. Generate the key pairs and certificate requests for each FQDN using AWS KMS
- E. Associate the certificates with the ALBs in both the primary and secondary AWS Regions.
- F. Request a certificate for each FQDN using AWS Certificate Manager
- G. Associate the certificates with the ALBs in both the primary and secondary AWS Regions.
- H. Request certificates for each FQDN in both the primary and secondary AWS Regions using AWS Certificate Manager
- I. Associate the certificates with the corresponding ALBs in each AWS Region.

**Answer:** D

#### Explanation:

<https://docs.aws.amazon.com/acm/latest/userguide/acm-regions.html>

Certificates in ACM are regional resources. To use a certificate with Elastic Load Balancing for the same fully qualified domain name (FQDN) or set of FQDNs in more than one AWS region, you must request or import a certificate for each region. For certificates provided by ACM, this means you must revalidate each domain name in the certificate for each region. You cannot copy a certificate between regions.

#### NEW QUESTION 89

An internal security audit of AWS resources within a company found that a number of Amazon EC2 instances running Microsoft Windows workloads were missing several important operating system-level patches. A Solutions Architect has been asked to fix existing patch deficiencies, and to develop a workflow to ensure that future patching requirements are identified and taken care of quickly. The Solutions Architect has decided to use AWS Systems Manager. It is important that EC2 instance reboots do not occur at the same time on all Windows workloads to meet organizational uptime requirements.

Which workflow will meet these requirements in an automated manner?

- A. Add a Patch Group tag with a value of Windows Servers to all existing EC2 instances
- B. Ensure that all Windows EC2 instances are assigned this tag
- C. Associate the AWS-DefaultPatchBaseline to the Windows servers patch group
- D. Define an AWS Systems Manager maintenance window, conduct patching within it, and associate it with the Windows Servers patch group
- E. Register instances with the maintenance window using associated subnet ID
- F. Assign the AWS-RunPatchBaseline document as a task within each maintenance window.
- G. Add a Patch Group tag with a value of Windows Servers to all existing EC2 instances
- H. Ensure that all Windows EC2 instances are assigned this tag
- I. Associate the AWS-WindowsPatchBaseline document as a task associated with the Windows Servers patch group
- J. Create an Amazon CloudWatch Events rule configured to use a cron expression to schedule the execution of patching using the AWS Systems Manager run command
- K. Create an AWS Systems Manager State Manager document to define commands to be executed during patch execution.
- L. Add a Patch Group tag with a value of either Windows Servers1 or Windows Servers2 to all existing EC2 instances
- M. Ensure that all Windows EC2 instances are assigned this tag
- N. Associate the AWS-DefaultPatchBaseline with both Windows Servers patch groups
- O. Define two non-overlapping AWS Systems Manager maintenance windows, conduct patching within them, and associate each with a different patch group
- P. Register targets with specific maintenance windows using the Patch Group tag
- Q. Assign the AWS-RunPatchBaseline document as a task within each maintenance window.
- R. Add a Patch Group tag with a value of either Windows Servers1 or Windows Servers2 to all existing EC2 instances
- S. Ensure that all Windows EC2 instances are assigned this tag
- T. Associate the AWS-WindowsPatchBaseline with both Windows Servers patch groups

- . Define two non-overlapping AWS Systems Manager maintenance windows, conduct patching within them, and associate each with a different patch group
- . Assign the AWS-RunWindowsPatchBaseline document as a task within each maintenance window
- . Create an AWS Systems Manager State Manager document to define commands to be executed during patch execution.

**Answer: C**

#### NEW QUESTION 93

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 instances
- 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 patching
- 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 type
- 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 installation
- 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 97

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 101

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 103

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 106

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 108

The CISO of a large enterprise with multiple IT departments, each with its own AWS account, wants one central place where AWS permissions for users can be managed and users authentication credentials can be synchronized with the company's existing on-premises solution.

Which solution will meet the CISO's requirements?

- A. Define AWS IAM roles based on the functional responsibilities of the users in a central account
- B. Create a SAML-based identity management provider
- C. Map users in the on-premises groups to IAM role
- D. Establish trust relationships between the other accounts and the central account.
- E. Deploy a common set of AWS IAM users, groups, roles, and policies in all of the AWS accounts using AWS Organization
- F. Implement federation between the on-premises identity provider and the AWS accounts.
- G. Use AWS Organizations in a centralized account to define service control policies (SCPs). Create a SAML-based identity management provider in each account and map users in the on-premises groups to AWS IAM roles.
- H. Perform a thorough analysis of the user base and create AWS IAM users accounts that have the necessary permission
- I. Set up a process to provision and de provision accounts based on data in the on-premises solution.

**Answer:** A

**Explanation:**

[https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial\\_cross-account-with-roles.html](https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial_cross-account-with-roles.html)

#### NEW QUESTION 112

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 115**

A company needs to run a software package that has a license that must be run on the same physical host for the duration of its use. The software package is only going to be used for 90 days. The company requires patching and restarting of all instances every 30 days. How can these requirements be met using AWS?

- A. Run a dedicated instance with auto-placement disabled.
- B. Run the instance on a dedicated host with Host Affinity set to Host.
- C. Run an On-Demand instance with a Reserved Instance to ensure consistent placement.
- D. Run the instance on a licensed host with termination set for 90 days.

**Answer: B**

**Explanation:**

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/how-dedicated-hosts-work.html>

**NEW QUESTION 119**

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 120**

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 121**

A financial services company logs personally identifiable information to its application logs stored in Amazon S3. Due to regulatory compliance requirements, the log files must be encrypted at rest. The Security team has mandated that the company's on-premises hardware security modules (HSMs) be used to generate the CMK material. Which steps should the Solution Architect take to meet these requirements?

- A. Create an AWS CloudHSM cluster
- B. Create a new CMK in AWS KMS using AWS\_CloudHSM as the source for the key material and an origin of AWS-CLOUDHSM
- C. Enable automatic key rotation on the CMK with a duration of 1 year
- D. Configure a bucket policy on the logging bucket to disallow uploads of unencrypted data and requires that the encryption source be AWS KMS.
- E. Provision an AWS Direct Connect connection, ensuring there is no overlap of the RFC 1918 address space between on-premises hardware and the VPC
- F. Configure an AWS bucket policy on the logging bucket requires all objects to be key material, and create a unique CMK for each logging event.
- G. Create a CMK in AWS KMS with no key material and an origin of EXTERNAL
- H. Import the key material generated from the on-premises HSMs into the CMK using the public key and import token provided by AWS
- I. Configure a bucket policy on the logging bucket that disallows uploads of non-encrypted data and requires that the encryption source be AWS KMS.
- J. Create a new CMK in AWS KMS with AWS-provided key material and an origin of AWS-KMS
- K. Disable this CMK, and overwrite the key material with the material from the on-premises HSM using the public key and import token provided by AWS Re-enable the CMK
- L. Enable automatic key rotation on the CMK with a duration of 1 year

M. Configure a bucket policy on the logging bucket that disallows uploads of non-encrypted data and requires that the encryption source be AWS KMS.

**Answer:** A

#### NEW QUESTION 123

A Solutions Architect is designing a multi-account structure that has 10 existing accounts. The design must meet the following requirements:

- Consolidate all accounts into one organization.
- Allow full access to the Amazon EC2 service from the master account and the secondary accounts.
- Minimize the effort required to add additional secondary accounts.

Which combination of steps should be included in the solution? (Choose two.)

- A. Create an organization from the master account
- B. Send invitations to the secondary accounts from the master account
- C. Accept the invitations and create an OU.
- D. Create an organization from the master account
- E. Send a join request to the master account from each secondary account
- F. Accept the requests and create an OU.
- G. Create a VPC peering connection between the master account and the secondary account
- H. Accept the request for the VPC peering connection.
- I. Create a service control policy (SCP) that enables full EC2 access, and attach the policy to the OU.
- J. Create a full EC2 access policy and map the policy to a role in each account
- K. Trust every other account to assume the role.

**Answer:** AD

#### Explanation:

There is a concept of Permission Boundary vs Actual IAM Policies That is, we have a concept of "Allow" vs "Grant". In terms of boundaries, we have the following three boundaries: 1. SCP 2. User/Role boundaries 3. Session boundaries (ex. AssumeRole ... ) In terms of actual permission granting, we have the following: 1. Identity Policies 2. Resource Policies

#### NEW QUESTION 126

A company is migrating its on-premises build artifact server to an AWS solution. The current system consists of an Apache HTTP server that serves artifacts to clients on the local network, restricted by the perimeter firewall. The artifact consumers are largely build automation scripts that download artifacts via anonymous HTTP, which the company will be unable to modify within its migration timetable.

The company decides to move the solution to Amazon S3 static website hosting. The artifact consumers will be migrated to Amazon EC2 instances located within both public and private subnets in a virtual private cloud (VPC).

Which solution will permit the artifact consumers to download artifacts without modifying the existing automation scripts?

- A. Create a NAT gateway within a public subnet of the VPC
- B. Add a default route pointing to the NAT gateway into the route table associated with the subnets containing consumer
- C. Configure the bucket policy to allow the s3:ListBucket and s3:GetObject actions using the condition IpAddress and the condition key aws:SourceIp matching the elastic IP address if the NAT gateway.
- D. Create a VPC endpoint and add it to the route table associated with subnets containing consumers. Configure the bucket policy to allow s3:ListBucket and s3:GetObject actions using the condition StringEquals and the condition key aws:sourceVpce matching the identification of the VPC endpoint.
- E. Create an IAM role and instance profile for Amazon EC2 and attach it to the instances that consume build artifact
- F. Configure the bucket policy to allow the s3:ListBucket and s3:GetObjects actions for the principal matching the IAM role created.
- G. Create a VPC endpoint and add it to the route table associated with subnets containing consumers. Configure the bucket policy to allow s3:ListBucket and s3:GetObject actions using the condition IpAddress and the condition key aws:SourceIp matching the VPC CIDR block.

**Answer:** B

#### NEW QUESTION 127

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 one 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 131

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 CloudFormer to create AWS CloudFormation stacks from the current resource
- B. Deploy that stack by using AWS CloudFormation in the same regio
- 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 configuratio
- 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 option
- H. Register for an AWS Support Developer pla
- I. Review the instance usage for the application by using Amazon CloudWatch, and identify less expensive instances that can handle the loa
- 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 EC
- 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 135

A company wants to migrate its website from an on-premises data center onto AWS. At the same time, it wants to migrate the website to a containerized microservice-based architecture to improve the availability and cost efficiency. The company's security policy states that privileges and network permissions must be configured according to best practice, using least privilege.

A Solutions Architect must create a containerized architecture that meets the security requirements and has deployed the application to an Amazon ECS cluster. What steps are required after the deployment to meet the requirements? (Choose two.)

- A. Create tasks using the bridge network mode.
- B. Create tasks using the awsvpc network mode.
- C. Apply security groups to Amazon EC2 instances, and use IAM roles for EC2 instances to access other resources.
- D. Apply security groups to the tasks, and pass IAM credentials into the container at launch time to access other resources.
- E. Apply security groups to the tasks, and use IAM roles for tasks to access other resources.

**Answer:** BE

#### Explanation:

<https://aws.amazon.com/about-aws/whats-new/2017/11/amazon-ecs-introduces-awsvpc-networking-mode-for-c>

<https://amazonaws-china.com/blogs/compute/introducing-cloud-native-networking-for-ecs-containers/>

<https://docs.aws.amazon.com/AmazonECS/latest/developerguide/task-iam-roles.html>

#### NEW QUESTION 138

A Solutions Architect needs to design a highly available application that will allow authenticated users to stay connected to the application even when there are underlying failures

Which solution will meet these requirements?

- A. Deploy the application on Amazon EC2 instances Use Amazon Route 53 to forward requests to the EC2 Instances Use Amazon DynamoDB to save the authenticated connection details
- B. Deploy the application on Amazon EC2 instances in an Auto Scaling group Use an internet-facing Application Load Balancer to handle requests Use Amazon DynamoDB to save the authenticated connection details
- C. Deploy the application on Amazon EC2 instances in an Auto Scaling group Use an internet-facing Application Load Balancer on the front end Use EC2 instances to save the authenticated connectiondetails
- D. Deploy the application on Amazon EC2 instances in an Auto Scaling group Use an internet-facing Application Load Balancer on the front end Use EC2 instances hosting a MySQL database to save the authenticated connection details

**Answer:** B

#### NEW QUESTION 140

A large company is migrating its entire IT portfolio to AWS. Each business unit in the company has a standalone AWS account that supports both development and test environments. New accounts to support production workloads will be needed soon.

The Finance department requires a centralized method for payment but must maintain visibility into each group's spending to allocate costs.

The Security team requires a centralized mechanism to control IAM usage in all the company's accounts. What combination of the following options meet the company's needs with LEAST effort? (Choose two.)

- A. Use a collection of parameterized AWS CloudFormation templates defining common IAM permissions that are launched into each account
- B. Require all new and existing accounts to launch the appropriate stacks to enforce the least privilege model.
- C. Use AWS Organizations to create a new organization from a chosen payer account and define an organizational unit hierarch
- D. Invite the existing accounts to join the organization and create new accounts using Organizations.
- E. Require each business unit to use its own AWS account
- F. Tag each AWS account appropriately and enable Cost Explorer to administer chargebacks.
- G. Enable all features of AWS Organizations and establish appropriate service control policies that filter IAM permissions for sub-accounts.
- H. Consolidate all of the company's AWS accounts into a single AWS account
- I. Use tags for billing purposes and IAM's Access Advice feature to enforce the least privilege model.

**Answer:** BD

#### NEW QUESTION 143

A company is planning the migration of several lab environments used for software testing. An assortment of custom tooling is used to manage the test runs for each lab. The labs use immutable infrastructure for the software test runs, and the results are stored in a highly available SQL database cluster. Although completely rewriting the custom tooling is out of scope for the migration project, the company would like to optimize workloads during the migration.

Which application migration strategy meets this requirement?

- A. Re-host
- B. Re-platform
- C. Re-factor/re-architect
- D. Retire

**Answer: B**

**Explanation:**

<https://aws.amazon.com/blogs/enterprise-strategy/6-strategies-for-migrating-applications-to-the-cloud/>

**NEW QUESTION 145**

A company has deployed an application to multiple environments in AWS, including production and testing. The company has separate accounts for production and testing, and users are allowed to create additional application users for team members or services, as needed. The Security team has asked the Operations team for better isolation between production and testing with centralized controls on security credentials and improved management of permissions between environments.

Which of the following options would MOST securely accomplish this goal?

- A. Create a new AWS account to hold user and service accounts, such as an identity account
- B. Create users and groups in the identity account
- C. Create roles with appropriate permissions in the production and testing account
- D. Add the identity account to the trust policies for the roles.
- E. Modify permissions in the production and testing accounts to limit creating new IAM users to members of the Operations team
- F. Set a strong IAM password policy on each account
- G. Create new IAM users and groups in each account to limit developer access to just the services required to complete their job function.
- H. Create a script that runs on each account that checks user accounts for adherence to a security policy. Disable any user or service accounts that do not comply.
- I. Create all user accounts in the production account
- J. Create roles for access in the production account and testing account
- K. Grant cross-account access from the production account to the testing account.

**Answer: A**

**Explanation:**

<https://aws.amazon.com/blogs/security/how-to-centralize-and-automate-iam-policy-creation-in-sandbox-develop>

**NEW QUESTION 146**

A company wants to move a web application to AWS. The application stores session information locally on each web server, which will make auto scaling difficult. As part of the migration, the application will be rewritten to decouple the session data from the web servers. The company requires low latency, scalability, and availability.

Which service will meet the requirements for storing the session information in the MOST cost-effective way?

- A. Amazon ElastiCache with the Memcached engine
- B. Amazon S3
- C. Amazon RDS MySQL
- D. Amazon ElastiCache with the Redis engine

**Answer: D**

**Explanation:**

<https://aws.amazon.com/caching/session-management/> <https://aws.amazon.com/elasticache/redis-vs-memcached/>

**NEW QUESTION 150**

During a security audit of a Service team's application a Solutions Architect discovers that a username and password for an Amazon RDS database and a set of AWS IAM user credentials can be viewed in the AWS Lambda function code. The Lambda function uses the username and password to run queries on the database and it uses the IAM credentials to call AWS services in a separate management account.

The Solutions Architect is concerned that the credentials could grant inappropriate access to anyone who can view the Lambda code. The management account and the Service team's account are in separate AWS Organizations organizational units (OUs).

Which combination of changes should the Solutions Architect make to improve the solution's security? (Select TWO)

- A. Configure Lambda to assume a role in the management account with appropriate access to AWS
- B. Configure Lambda to use the stored database credentials in AWS Secrets Manager and enable automatic rotation
- C. Create a Lambda function to rotate the credentials every hour by deploying a new Lambda version with the updated credentials
- D. Use an SCP on the management account OU to prevent IAM users from accessing resources in the Service team's account
- E. Enable AWS Shield Advanced on the management account to shield sensitive resources from unauthorized IAM access

**Answer: BD**

**NEW QUESTION 153**

A public retail web application uses an Application Load Balancer (ALB) in front of Amazon EC2 instances running across multiple Availability Zones (AZs) in a Region backed by an Amazon RDS MySQL Multi-AZ deployment. Target group health checks are configured to use HTTP and pointed at the product catalog page. Auto Scaling is configured to maintain the web fleet size based on the ALB health check.

Recently, the application experienced an outage. Auto Scaling continuously replaced the instances during the outage. A subsequent investigation determined that the web server metrics were within the normal range, but the database tier was experiencing high load, resulting in severely elevated query response times.

Which of the following changes together would remediate these issues while improving monitoring capabilities for the availability and functionality of the entire application stack for future growth? (Select TWO.)

- A. Configure read replicas for Amazon RDS MySQL and use the single reader endpoint in the web application to reduce the load on the backend database tier.
- B. Configure the target group health check to point at a simple HTML page instead of a product catalog page and the Amazon Route 53 health check against the product page to evaluate full application functionality
- C. Configure Amazon CloudWatch alarms to notify administrators when the site fails.

- D. Configure the target group health check to use a TCP check of the Amazon EC2 web server and the Amazon Route 53 health check against the product page to evaluate full application functionalit
- E. Configure Amazon CloudWatch alarms to notify administrators when the site fails.
- F. Configure an Amazon CloudWatch alarm for Amazon RDS with an action to recover a high-load, impaired RDS instance in the database tier.
- G. Configure an Amazon ElastiCache cluster and place it between the web application and RDS MySQL instances to reduce the load on the backend database tier.

**Answer:** BE

#### NEW QUESTION 156

An auction website enables users to bid on collectible items. The auction rules require that each bid is processed only once and in the order it was received. The current implementation is based on a fleet of Amazon EC2 web servers that write bid records into Amazon Kinesis Data Streams. A single t2.large instance has a cron job that runs the bid processor, which reads incoming bids from Kinesis Data Streams and processes each bid. The auction site is growing in popularity, but users are complaining that some bids are not registering.

Troubleshooting indicates that the bid processor is too slow during peak demand hours, sometimes crashes while processing, and occasionally loses track of which records is being processed.

What changes should make the bid processing more reliable?

- A. Refactor the web application to use the Amazon Kinesis Producer Library (KPL) when posting bids to Kinesis Data Stream
- B. Refactor the bid processor to flag each record in Kinesis Data Streams as being unread, processing, and processe
- C. At the start of each bid processing run, scan Kinesis Data Streams for unprocessed records.
- D. Refactor the web application to post each incoming bid to an Amazon SNS topic in place of Kinesis Data Stream
- E. Configure the SNS topic to trigger an AWS Lambda function that processes each bid as soon as a user submits it.
- F. Refactor the web application to post each incoming bid to an Amazon SQS FIFO queue in place of Kinesis Data Stream
- G. Refactor the bid processor to continuously the SQS queu
- H. Place the bid processing EC2 instance in an Auto Scaling group with a minimum and a maximum size of 1.
- I. Switch the EC2 instance type from t2.large to a larger general compute instance typ
- J. Put the bid processor EC2 instances in an Auto Scaling group that scales out the number of EC2 instances running the bid processor, based on the IncomingRecords metric in Kinesis Data Streams.

**Answer:** C

#### Explanation:

FIFO is better in this case compared to Kinesis, as it guarantee the order of the bid. Min Max 1, is okay as the SQS will hold the queue in case of failure of the instance, till it come back again.

#### NEW QUESTION 159

A company with multiple accounts is currently using a configuration that does not meet the following security governance policies

- Prevent ingress from port 22 to any Amazon EC2 instance
- Require billing and application tags for resources
- Encrypt all Amazon EBS volumes

A Solutions Architect wants to provide preventive and detective controls including notifications about a specific resource, if there are policy deviations.

Which solution should the Solutions Architect implement?

- A. Create an AWS CodeCommit repository containing policy-compliant AWS Cloud Formation templates.Create an AWS Service Catalog portfolio Import the Cloud Formation templates by attaching the CodeCommit repository to the portfolio Restrict users across all accounts to items from the AWSService Catalog portfolio Use AWS Config managed rules to detect deviations from the policie
- B. Configure an Amazon CloudWatch Events rule for deviations, and associate a CloudWatch alarm to send notifications when the TriggeredRules metric is greater than zero.
- C. Use AWS Service Catalog to build a portfolio with products that are in compliance with the governance policies in a central account Restrict users across all accounts lo AWS Service Catalog products Share a compliant portfolio to other accounts Use AWS Config managed rules to detect deviations from the policies Configure an Amazon CloudWatch Events rule to send a notification when a deviation occurs
- D. Implement policy-compliant AWS Cloud Formation templates for each account and ensure that all provisioning is completed by Cloud Formation Configure Amazon Inspector to perform regular checks against resources Perform policy validation and write the assessment output to Amazon CloudWatch Log
- E. Create a CloudWatch Logs metric filter to increment a metric when a deviation occurs Configure a CloudWatch alarm to send notifications when the configured metric is greater than zero
- F. Restrict users and enforce least privilege access using AWS I A
- G. Consolidate all AWS CloudTrail logs into a single account Send the CloudTrail logs to Amazon Elasticsearch Service (Amazon ES). Implement monitoring alerting, and reporting using the Kibana dashboard in Amazon ES and with Amazon SNS.

**Answer:** C

#### NEW QUESTION 160

A company has an application written using an in-house software framework. The framework installation takes 30 minutes and is performed with a user data script. Company Developers deploy changes to the application frequently. The framework installation is becoming a bottleneck in this process.

Which of the following would speed up this process?

- A. Create a pipeline to build a custom AMI with the framework installed and use this AMI as a baseline for application deployments.
- B. Employ a user data script to install the framework but compress the installation files to make them smaller.
- C. Create a pipeline to parallelize the installation tasks and call this pipeline from a user data script.
- D. Configure an AWS OpsWorks cookbook that installs the framework instead of employing user dat
- E. Use this cookbook as a base for all deployments.

**Answer:** A

#### Explanation:

<https://aws.amazon.com/codepipeline/features/?nc=sn&loc=2>

#### NEW QUESTION 161

A company must deploy multiple independent instances of an application. The front-end application is internet accessible. However, corporate policy stipulates that the backends are to be isolated from each other and the internet, yet accessible from a centralized administration server. The application setup should be automated to minimize the opportunity for mistakes as new instances are deployed.

Which option meets the requirements and MINIMIZES costs?

- A. Use an AWS CloudFormation template to create identical IAM roles for each regio
- B. Use AWS CloudFormation StackSets to deploy each application instance by using parameters to customize for each instance, and use security groups to isolate each instance while permitting access to the central server.
- C. Create each instance of the application IAM roles and resources in separate accounts by using AWS CloudFormation StackSet
- D. Include a VPN connection to the VPN gateway of the central administration server.
- E. Duplicate the application IAM roles and resources in separate accounts by using a single CloudFormation templat
- F. Include VPC peering to connect the VPC of each application instance to acentral VPC.
- G. Use the parameters of the AWS CloudFormation template to customize the deployment into separate account
- H. Include a NAT gateway to allow communication back to the central administration server.

**Answer:** A

#### NEW QUESTION 163

A Solutions Architect is working with a company that is extremely sensitive to its IT costs and wishes to implement controls that will result in a predictable AWS spend each month.

Which combination of steps can help the company control and monitor its monthly AWS usage to achieve a cost that is as close as possible to the target amount? (Choose three.)

- A. Implement an IAM policy that requires users to specify a 'workload' tag for cost allocation when launching Amazon EC2 instances.
- B. Contact AWS Support and ask that they apply limits to the account so that users are not able to launch more than a certain number of instance types.
- C. Purchase all upfront Reserved Instances that cover 100% of the account's expected Amazon EC2 usage.
- D. Place conditions in the users' IAM policies that limit the number of instances they are able to launch.
- E. Define 'workload' as a cost allocation tag in the AWS Billing and Cost Management console.
- F. Set up AWS Budgets to alert and notify when a given workload is expected to exceed a defined cost.

**Answer:** AEF

#### NEW QUESTION 164

A Solutions Architect is designing a highly available and reliable solution for a cluster of Amazon EC2 instances.

The Solutions Architect must ensure that any EC2 instance within the cluster recovers automatically after a system failure. The solution must ensure that the recovered instance maintains the same IP address.

How can these requirements be met?

- A. Create an AWS Lambda script to restart any EC2 instances that shut down unexpectedly.
- B. Create an Auto Scaling group for each EC2 instance that has a minimum and maximum size of 1.
- C. Create a new t2.micro instance to monitor the cluster instance
- D. Configure the t2.micro instance to issue an `aws ec2 reboot-instances` command upon failure.
- E. Create an Amazon CloudWatch alarm for the `StatusCheckFailed_System` metric, and then configure an EC2 action to recover the instance.

**Answer:** B

#### Explanation:

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

#### NEW QUESTION 168

A company collects a steady stream of 10 million data records from 100,000 sources each day. These records are written to an Amazon RDS MySQL DB. A query must produce the daily average of a data source over the past 30 days. There are twice as many reads as writes. Queries to the collected data are for one source ID at a time.

How can the Solutions Architect improve the reliability and cost effectiveness of this solution?

- A. Use Amazon Aurora with MySQL in a Multi-AZ mod
- B. Use four additional read replicas.
- C. Use Amazon DynamoDB with the source ID as the partition key and the timestamp as the sort ke
- D. Use a Time to Live (TTL) to delete data after 30 days.
- E. Use Amazon DynamoDB with the source ID as the partition ke
- F. Use a different table each day.
- G. Ingest data into Amazon Kinesis using a retention period of 30 day
- H. Use AWS Lambda to write data records to Amazon ElastiCache for read access.

**Answer:** B

#### Explanation:

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

#### NEW QUESTION 171

A company has developed a web application that runs on Amazon EC2 instances in one AWS Region. The company has taken on new business in other countries and must deploy its application into other to meet low-latency requirements for its users. The regions can be segregated, and an application running in one region does not need to communicate with instances in other regions.

How should the company's Solutions Architect automate the deployment of the application so that it can be MOST efficiently deployed into multiple regions?

- A. Write a bash script that uses the AWS CLI to query the current state in one region and output a JSON representatio
- B. Pass the JSON representation to the AWS CLI, specifying the `--region` parameter to deploy the application to other regions.
- C. Write a bash script that uses the AWS CLI to query the current state in one region and output an AWS CloudFormation templat
- D. Create a CloudFormation stack from the template by using the AWS CLI, specifying the `--region` parameter to deploy the application to other regions.

- E. Write a CloudFormation template describing the application's infrastructure in the resources section. Create a CloudFormation stack from the template by using the AWS CLI, specify multiple regions using the --regions parameter to deploy the application.
- F. Write a CloudFormation template describing the application's infrastructure in the Resources section. Use a CloudFormation stack set from an administrator account to launch stack instances that deploy the application to other regions.

**Answer: D**

**Explanation:**

A stack set lets you create stacks in AWS accounts across regions by using a single AWS CloudFormation template. All the resources included in each stack are defined by the stack set's AWS CloudFormation template. As you create the stack set, you specify the template to use, as well as any parameters and capabilities that template requires. <https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/stacksets-concepts.html>  
<https://sanderknape.com/2017/07/cloudformation-stacksets-automated-cross-account-region-deployments/>

**NEW QUESTION 175**

A bank is re-architecting its mainframe-based credit card approval processing application to a cloud-native application on the AWS cloud. The new application will receive up to 1,000 requests per second at peak load. There are multiple steps to each transaction, and each step must receive the result of the previous step. The entire request must return an authorization response within less than 2 seconds with zero data loss. Every request must receive a response. The solution must be Payment Card Industry Data Security Standard (PCI DSS)-compliant. Which option will meet all of the bank's objectives with the LEAST complexity and LOWEST cost while also meeting compliance requirements?

- A. Create an Amazon API Gateway to process inbound requests using a single AWS Lambda task that performs multiple steps and returns a JSON object with the approval status
- B. Open a support case to increase the limit for the number of concurrent Lambdas to allow room for bursts of activity due to the new application.
- C. Create an Application Load Balancer with an Amazon ECS cluster on Amazon EC2 Dedicated instances in a target group to process incoming request
- D. Use Auto Scaling to scale the cluster out/in based on average CPU utilization
- E. Deploy a web service that processes all of the approval steps and returns a JSON object with the approval status.
- F. Deploy the application on Amazon EC2 on Dedicated Instance
- G. Use an Elastic Load Balancer in front of a farm of application servers in an Auto Scaling group to handle incoming request
- H. Scale out/in based on a custom Amazon CloudWatch metric for the number of inbound requests per second after measuring the capacity of a single instance.
- I. Create an Amazon API Gateway to process inbound requests using a series of AWS Lambda processes, each with an Amazon SQS input queue
- J. As each step completes, it writes its result to the next step's queue
- K. The final step returns a JSON object with the approval status
- L. Open a support case to increase the limit for the number of concurrent Lambdas to allow room for bursts of activity due to the new application.

**Answer: B**

**NEW QUESTION 179**

A company has released a new version of a website to target an audience in Asia and South America. The website's media assets are hosted on Amazon S3 and have an Amazon CloudFront distribution to improve end-user performance. However, users are having a poor login experience the authentication service is only available in the us-east-1 AWS Region. How can the Solutions Architect improve the login experience and maintain high security and performance with minimal management overhead?

- A. Replicate the setup in each new geography and use Amazon Route 53 geo-based routing to route traffic to the AWS Region closest to the users.
- B. Use an Amazon Route 53 weighted routing policy to route traffic to the CloudFront distribution
- C. Use CloudFront cached HTTP methods to improve the user login experience.
- D. Use Amazon Lambda@Edge attached to the CloudFront viewer request trigger to authenticate and authorize users by maintaining a secure cookie token with a session expiry to improve the user experience in multiple geographies.
- E. Replicate the setup in each geography and use Network Load Balancers to route traffic to the authentication service running in the closest region to users.

**Answer: C**

**Explanation:**

There are several benefits to using Lambda@Edge for authorization operations. First, performance is improved by running the authorization function using Lambda@Edge closest to the viewer, reducing latency and response time to the viewer request. The load on your origin servers is also reduced by offloading CPU-intensive operations such as verification of JSON Web Token (JWT) signatures. Finally, there are security benefits such as filtering out unauthorized requests before they reach your origin infrastructure.

<https://aws.amazon.com/blogs/networking-and-content-delivery/authorization-edge-how-to-use-lambdaedge-and->

**NEW QUESTION 180**

A Company has a security event whereby an Amazon S3 bucket with sensitive information was made public. Company policy is to never have public S3 objects, and the Compliance team must be informed immediately when any public objects are identified. How can the presence of a public S3 object be detected, set to trigger alarm notifications, and automatically remediated in the future? (Choose two.)

- A. Turn on object-level logging for Amazon S3. Turn on Amazon S3 event notifications to notify by using an Amazon SNS topic when a PutObject API call is made with a public-read permission.
- B. Configure an Amazon CloudWatch Events rule that invokes an AWS Lambda function to secure the S3 bucket.
- C. Use the S3 bucket permissions for AWS Trusted Advisor and configure a CloudWatch event to notify by using Amazon SNS.
- D. Turn on object-level logging for Amazon S3. Configure a CloudWatch event to notify by using an SNS topic when a PutObject API call with public-read permission is detected in the AWS CloudTrail logs.
- E. Schedule a recursive Lambda function to regularly change all object permissions inside the S3 bucket.

**Answer: BD**

**Explanation:**

<https://aws.amazon.com/blogs/security/how-to-detect-and-automatically-remediate-unintended-permissions-in-a>

**NEW QUESTION 183**

A financial company is using a high-performance compute cluster running on Amazon EC2 instances to perform market simulations. A DNS record must be created in an Amazon Route 53 private hosted zone when instances start. The DNS record must be removed after instances are terminated.

Currently the company uses a combination of Amazon CloudWatch Events and AWS Lambda to create the DNS record. The solution worked well in testing with small clusters, but in production with clusters containing thousands of instances the company sees the following error in the Lambda logs:

HTTP 400 error (Bad request).

The response header also includes a status code element with a value of "Throttling" and a status message element with a value of "Rate exceeded "

Which combination of steps should the Solutions Architect take to resolve these issues? (Select THREE)

- A. Configure an Amazon SQS FIFO queue and configure a CloudWatch Events rule to use this queue as a target
- B. Remove the Lambda target from the CloudWatch Events rule
- C. Configure an Amazon Kinesis data stream and configure a CloudWatch Events rule to use this queue as a target Remove the Lambda target from the CloudWatch Events rule
- D. Update the CloudWatch Events rule to trigger on Amazon EC2 "Instance Launch Successful" and "Instance Terminate Successful" events for the Auto Scaling group used by the cluster
- E. Configure a Lambda function to retrieve messages from an Amazon SQS queue Modify the Lambda function to retrieve a maximum of 10 messages then batch the messages by Amazon Route 53 API call type and submit Delete the messages from the SQS queue after successful API calls.
- F. Configure an Amazon SQS standard queue and configure the existing CloudWatch Events rule to use this queue as a target Remove the Lambda target from the CloudWatch Events rule.
- G. Configure a Lambda function to read data from the Amazon Kinesis data stream and configure the batch window to 5 minutes Modify the function to make a single API call to Amazon Route 53 with all records read from the kinesis data stream

**Answer:** BEF

#### **NEW QUESTION 186**

.....

## **Thank You for Trying Our Product**

### **We offer two products:**

1st - We have Practice Tests Software with Actual Exam Questions

2nd - Questions and Answers in PDF Format

### **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 First Try
- \* SAP-C01 Practice Test Questions in Multiple Choice Formats and Updates for 1 Year

**100% Actual & Verified — Instant Download, Please Click**  
**[Order The SAP-C01 Practice Test Here](#)**