

Question #681

A company uses Amazon EC2 instances and stores data on Amazon Elastic Block Store (Amazon EBS) volumes. The company must ensure that all data is encrypted at rest by using AWS Key Management Service (AWS KMS). The company must be able to control rotation of the encryption keys. Which solution will meet these requirements with the LEAST operational overhead?

- A.** Create a customer managed key. Use the key to encrypt the EBS volumes.
- B.** Use an AWS managed key to encrypt the EBS volumes. Use the key to configure automatic key rotation.
- C.** Create an external KMS key with imported key material. Use the key to encrypt the EBS volumes.
- D.** Use an AWS owned key to encrypt the EBS volumes.

Question #682

A company needs a solution to enforce data encryption at rest on Amazon EC2 instances. The solution must automatically identify noncompliant resources and enforce compliance policies on findings. Which solution will meet these requirements with the LEAST administrative overhead?

- A.** Use an IAM policy that allows users to create only encrypted Amazon Elastic Block Store (Amazon EBS) volumes. Use AWS Config and AWS Systems Manager to automate the detection and remediation of unencrypted EBS volumes.
- B.** Use AWS Key Management Service (AWS KMS) to manage access to encrypted Amazon Elastic Block Store (Amazon EBS) volumes. Use AWS Lambda and Amazon EventBridge to automate the detection and remediation of unencrypted EBS volumes.
- C.** Use Amazon Macie to detect unencrypted Amazon Elastic Block Store (Amazon EBS) volumes. Use AWS Systems Manager Automation rules to automatically encrypt existing and new EBS volumes.
- D.** Use Amazon Inspector to detect unencrypted Amazon Elastic Block Store (Amazon EBS) volumes. Use AWS Systems Manager Automation rules to automatically encrypt existing and new EBS volumes.

Question #683

A company is migrating its multi-tier on-premises application to AWS. The application consists of a single-node MySQL database and a multi-node web tier. The company must minimize changes to the application during the migration. The company wants to improve application resiliency after the migration. Which combination of steps will meet these requirements? (Choose two.)

- A.** Migrate the web tier to Amazon EC2 instances in an Auto Scaling group behind an Application Load Balancer.
- B.** Migrate the database to Amazon EC2 instances in an Auto Scaling group behind a Network Load Balancer.
- C.** Migrate the database to an Amazon RDS Multi-AZ deployment.
- D.** Migrate the web tier to an AWS Lambda function.
- E.** Migrate the database to an Amazon DynamoDB table.

Question #684

A company wants to migrate its web applications from on premises to AWS. The company is located close to the eu-central-1 Region. Because of regulations, the company cannot launch some of its applications in eu-central-1. The company wants to achieve single-digit millisecond latency. Which solution will meet these requirements?

- A.** Deploy the applications in eu-central-1. Extend the company's VPC from eu-central-1 to an edge location in Amazon CloudFront.
- B.** Deploy the applications in AWS Local Zones by extending the company's VPC from eu-central-1 to the chosen Local Zone.
- C.** Deploy the applications in eu-central-1. Extend the company's VPC from eu-central-1 to the regional edge caches in Amazon CloudFront.
- D.** Deploy the applications in AWS Wavelength Zones by extending the company's VPC from eu-central-1 to the chosen Wavelength Zone.

Question #685

A company's ecommerce website has unpredictable traffic and uses AWS Lambda functions to directly access a private Amazon RDS for PostgreSQL DB instance. The company wants to maintain predictable database performance and ensure that the Lambda invocations do not overload the database with too many connections. What should a solutions architect do to meet these requirements?

- A.** Point the client driver at an RDS custom endpoint. Deploy the Lambda functions inside a VP
- C.
- B.** Point the client driver at an RDS proxy endpoint. Deploy the Lambda functions inside a VP
- C.
- C.** Point the client driver at an RDS custom endpoint. Deploy the Lambda functions outside a VP
- C.
- D.** Point the client driver at an RDS proxy endpoint. Deploy the Lambda functions outside a VPC.

Question #686

A company is creating an application. The company stores data from tests of the application in multiple on-premises locations. The company needs to connect the on-premises locations to VPCs in an AWS Region in the AWS Cloud. The number of accounts and VPCs will increase during the next year. The network architecture must simplify the administration of new connections and must provide the ability to scale. Which solution will meet these requirements with the LEAST administrative overhead?

- A.** Create a peering connection between the VPCs. Create a VPN connection between the VPCs and the on-premises locations.
- B.** Launch an Amazon EC2 instance. On the instance, include VPN software that uses a VPN connection to connect all VPCs and on-premises locations.
- C.** Create a transit gateway. Create VPC attachments for the VPC connections. Create VPN attachments for the on-premises connections.
- D.** Create an AWS Direct Connect connection between the on-premises locations and a central VP
- C.** Connect the central VPC to other VPCs by using peering connections.

Question #687

A company that uses AWS needs a solution to predict the resources needed for manufacturing processes each month. The solution must use historical values that are currently stored in an Amazon S3 bucket. The company has no machine learning (ML) experience and wants to use a managed service for the training and predictions. Which combination of steps will meet these requirements? (Choose two.)

- A.** Deploy an Amazon SageMaker model. Create a SageMaker endpoint for inference.
- B.** Use Amazon SageMaker to train a model by using the historical data in the S3 bucket.
- C.** Configure an AWS Lambda function with a function URL that uses Amazon SageMaker endpoints to create predictions based on the inputs.
- D.** Configure an AWS Lambda function with a function URL that uses an Amazon Forecast predictor to create a prediction based on the inputs.
- E.** Train an Amazon Forecast predictor by using the historical data in the S3 bucket.

Question #688

A company manages AWS accounts in AWS Organizations. AWS IAM Identity Center (AWS Single Sign-On) and AWS Control Tower are configured for the accounts. The company wants to manage multiple user permissions across all the accounts. The permissions will be used by multiple IAM users and must be split between the developer and administrator teams. Each team requires different permissions. The company wants a solution that includes new users that are hired on both teams. Which solution will meet these requirements with the LEAST operational overhead?

- A.** Create individual users in IAM Identity Center for each account. Create separate developer and administrator groups in IAM Identity Center. Assign the users to the appropriate groups. Create a custom IAM policy for each group to set fine-grained permissions.
- B.** Create individual users in IAM Identity Center for each account. Create separate developer and administrator groups in IAM Identity Center. Assign the users to the appropriate groups. Attach AWS managed IAM policies to each user as needed for fine-grained permissions.
- C.** Create individual users in IAM Identity Center. Create new developer and administrator groups in IAM Identity Center. Create new permission sets that include the appropriate IAM policies for each group. Assign the new groups to the appropriate accounts. Assign the new permission sets to the new groups. When new users are hired, add them to the appropriate group.
- D.** Create individual users in IAM Identity Center. Create new permission sets that include the appropriate IAM policies for each user. Assign the users to the appropriate accounts. Grant additional IAM permissions to the users from within specific accounts. When new users are hired, add them to IAM Identity Center and assign them to the accounts.

Question #689

A company wants to standardize its Amazon Elastic Block Store (Amazon EBS) volume encryption strategy. The company also wants to minimize the cost and configuration effort required to operate the volume encryption check. Which solution will meet these requirements?

- A.** Write API calls to describe the EBS volumes and to confirm the EBS volumes are encrypted. Use Amazon EventBridge to schedule an AWS Lambda function to run the API calls.
- B.** Write API calls to describe the EBS volumes and to confirm the EBS volumes are encrypted. Run the API calls on an AWS Fargate task.
- C.** Create an AWS Identity and Access Management (IAM) policy that requires the use of tags on EBS volumes. Use AWS Cost Explorer to display resources that are not properly tagged. Encrypt the untagged resources manually.
- D.** Create an AWS Config rule for Amazon EBS to evaluate if a volume is encrypted and to flag the volume if it is not encrypted.

Question #690

A company regularly uploads GB-sized files to Amazon S3. After the company uploads the files, the company uses a fleet of Amazon EC2 Spot Instances to transcode the file format. The company needs to scale throughput when the company uploads data from the on-premises data center to Amazon S3 and when the company downloads data from Amazon S3 to the EC2 instances. Which solutions will meet these requirements? (Choose two.)

- A. Use the S3 bucket access point instead of accessing the S3 bucket directly.
- B. Upload the files into multiple S3 buckets.
- C. Use S3 multipart uploads.
- D. Fetch multiple byte-ranges of an object in parallel.
- E. Add a random prefix to each object when uploading the files.

Question #691

A solutions architect is designing a shared storage solution for a web application that is deployed across multiple Availability Zones. The web application runs on Amazon EC2 instances that are in an Auto Scaling group. The company plans to make frequent changes to the content. The solution must have strong consistency in returning the new content as soon as the changes occur. Which solutions meet these requirements? (Choose two.)

- A.** Use AWS Storage Gateway Volume Gateway Internet Small Computer Systems Interface (iSCSI) block storage that is mounted to the individual EC2 instances.
- B.** Create an Amazon Elastic File System (Amazon EFS) file system. Mount the EFS file system on the individual EC2 instances.
- C.** Create a shared Amazon Elastic Block Store (Amazon EBS) volume. Mount the EBS volume on the individual EC2 instances.
- D.** Use AWS DataSync to perform continuous synchronization of data between EC2 hosts in the Auto Scaling group.
- E.** Create an Amazon S3 bucket to store the web content. Set the metadata for the Cache-Control header to no-cache. Use Amazon CloudFront to deliver the content.

Question #692

A company is deploying an application in three AWS Regions using an Application Load Balancer. Amazon Route 53 will be used to distribute traffic between these Regions. Which Route 53 configuration should a solutions architect use to provide the MOST high-performing experience?

- A.** Create an A record with a latency policy.
- B.** Create an A record with a geolocation policy.
- C.** Create a CNAME record with a failover policy.
- D.** Create a CNAME record with a geoproximity policy.

Question #693

A company has a web application that includes an embedded NoSQL database. The application runs on Amazon EC2 instances behind an Application Load Balancer (ALB). The instances run in an Amazon EC2 Auto Scaling group in a single Availability Zone. A recent increase in traffic requires the application to be highly available and for the database to be eventually consistent. Which solution will meet these requirements with the LEAST operational overhead?

- A.** Replace the ALB with a Network Load Balancer. Maintain the embedded NoSQL database with its replication service on the EC2 instances.
- B.** Replace the ALB with a Network Load Balancer. Migrate the embedded NoSQL database to Amazon DynamoDB by using AWS Database Migration Service (AWS DMS).
- C.** Modify the Auto Scaling group to use EC2 instances across three Availability Zones. Maintain the embedded NoSQL database with its replication service on the EC2 instances.
- D.** Modify the Auto Scaling group to use EC2 instances across three Availability Zones. Migrate the embedded NoSQL database to Amazon DynamoDB by using AWS Database Migration Service (AWS DMS).

Question #694

A company is building a shopping application on AWS. The application offers a catalog that changes once each month and needs to scale with traffic volume. The company wants the lowest possible latency from the application. Data from each user's shopping cart needs to be highly available. User session data must be available even if the user is disconnected and reconnects. What should a solutions architect do to ensure that the shopping cart data is preserved at all times?

- A.** Configure an Application Load Balancer to enable the sticky sessions feature (session affinity) for access to the catalog in Amazon Aurora.
- B.** Configure Amazon ElastiCache for Redis to cache catalog data from Amazon DynamoDB and shopping cart data from the user's session.
- C.** Configure Amazon OpenSearch Service to cache catalog data from Amazon DynamoDB and shopping cart data from the user's session.
- D.** Configure an Amazon EC2 instance with Amazon Elastic Block Store (Amazon EBS) storage for the catalog and shopping cart. Configure automated snapshots.

Question #695

A company is building a microservices-based application that will be deployed on Amazon Elastic Kubernetes Service (Amazon EKS). The microservices will interact with each other. The company wants to ensure that the application is observable to identify performance issues in the future. Which solution will meet these requirements?

- A.** Configure the application to use Amazon ElastiCache to reduce the number of requests that are sent to the microservices.
- B.** Configure Amazon CloudWatch Container Insights to collect metrics from the EKS clusters. Configure AWS X-Ray to trace the requests between the microservices.
- C.** Configure AWS CloudTrail to review the API calls. Build an Amazon QuickSight dashboard to observe the microservice interactions.
- D.** Use AWS Trusted Advisor to understand the performance of the application.

Question #696

A company needs to provide customers with secure access to its data. The company processes customer data and stores the results in an Amazon S3 bucket. All the data is subject to strong regulations and security requirements. The data must be encrypted at rest. Each customer must be able to access only their data from their AWS account. Company employees must not be able to access the data. Which solution will meet these requirements?

- A.** Provision an AWS Certificate Manager (ACM) certificate for each customer. Encrypt the data client-side. In the private certificate policy, deny access to the certificate for all principals except an IAM role that the customer provides.
- B.** Provision a separate AWS Key Management Service (AWS KMS) key for each customer. Encrypt the data server-side. In the S3 bucket policy, deny decryption of data for all principals except an IAM role that the customer provides.
- C.** Provision a separate AWS Key Management Service (AWS KMS) key for each customer. Encrypt the data server-side. In each KMS key policy, deny decryption of data for all principals except an IAM role that the customer provides.
- D.** Provision an AWS Certificate Manager (ACM) certificate for each customer. Encrypt the data client-side. In the public certificate policy, deny access to the certificate for all principals except an IAM role that the customer provides.

Question #697

A solutions architect creates a VPC that includes two public subnets and two private subnets. A corporate security mandate requires the solutions architect to launch all Amazon EC2 instances in a private subnet. However, when the solutions architect launches an EC2 instance that runs a web server on ports 80 and 443 in a private subnet, no external internet traffic can connect to the server. What should the solutions architect do to resolve this issue?

- A.** Attach the EC2 instance to an Auto Scaling group in a private subnet. Ensure that the DNS record for the website resolves to the Auto Scaling group identifier.
- B.** Provision an internet-facing Application Load Balancer (ALB) in a public subnet. Add the EC2 instance to the target group that is associated with the ALB. Ensure that the DNS record for the website resolves to the ALB.
- C.** Launch a NAT gateway in a private subnet. Update the route table for the private subnets to add a default route to the NAT gateway. Attach a public Elastic IP address to the NAT gateway.
- D.** Ensure that the security group that is attached to the EC2 instance allows HTTP traffic on port 80 and HTTPS traffic on port 443. Ensure that the DNS record for the website resolves to the public IP address of the EC2 instance.

Question #698

A company is deploying a new application to Amazon Elastic Kubernetes Service (Amazon EKS) with an AWS Fargate cluster. The application needs a storage solution for data persistence. The solution must be highly available and fault tolerant. The solution also must be shared between multiple application containers. Which solution will meet these requirements with the LEAST operational overhead?

- A.** Create Amazon Elastic Block Store (Amazon EBS) volumes in the same Availability Zones where EKS worker nodes are placed. Register the volumes in a StorageClass object on an EKS cluster. Use EBS Multi-Attach to share the data between containers.
- B.** Create an Amazon Elastic File System (Amazon EFS) file system. Register the file system in a StorageClass object on an EKS cluster. Use the same file system for all containers.
- C.** Create an Amazon Elastic Block Store (Amazon EBS) volume. Register the volume in a StorageClass object on an EKS cluster. Use the same volume for all containers.
- D.** Create Amazon Elastic File System (Amazon EFS) file systems in the same Availability Zones where EKS worker nodes are placed. Register the file systems in a StorageClass object on an EKS cluster. Create an AWS Lambda function to synchronize the data between file systems.

Question #699

A company has an application that uses Docker containers in its local data center. The application runs on a container host that stores persistent data in a volume on the host. The container instances use the stored persistent data. The company wants to move the application to a fully managed service because the company does not want to manage any servers or storage infrastructure. Which solution will meet these requirements?

- A.** Use Amazon Elastic Kubernetes Service (Amazon EKS) with self-managed nodes. Create an Amazon Elastic Block Store (Amazon EBS) volume attached to an Amazon EC2 instance. Use the EBS volume as a persistent volume mounted in the containers.
- B.** Use Amazon Elastic Container Service (Amazon ECS) with an AWS Fargate launch type. Create an Amazon Elastic File System (Amazon EFS) volume. Add the EFS volume as a persistent storage volume mounted in the containers.
- C.** Use Amazon Elastic Container Service (Amazon ECS) with an AWS Fargate launch type. Create an Amazon S3 bucket. Map the S3 bucket as a persistent storage volume mounted in the containers.
- D.** Use Amazon Elastic Container Service (Amazon ECS) with an Amazon EC2 launch type. Create an Amazon Elastic File System (Amazon EFS) volume. Add the EFS volume as a persistent storage volume mounted in the containers.

Question #700

A gaming company wants to launch a new internet-facing application in multiple AWS Regions. The application will use the TCP and UDP protocols for communication. The company needs to provide high availability and minimum latency for global users. Which combination of actions should a solutions architect take to meet these requirements? (Choose two.)

- A.** Create internal Network Load Balancers in front of the application in each Region.
- B.** Create external Application Load Balancers in front of the application in each Region.
- C.** Create an AWS Global Accelerator accelerator to route traffic to the load balancers in each Region.
- D.** Configure Amazon Route 53 to use a geolocation routing policy to distribute the traffic.
- E.** Configure Amazon CloudFront to handle the traffic and route requests to the application in each Region

Question #701

A city has deployed a web application running on Amazon EC2 instances behind an Application Load Balancer (ALB). The application's users have reported sporadic performance, which appears to be related to DDoS attacks originating from random IP addresses. The city needs a solution that requires minimal configuration changes and provides an audit trail for the DDoS sources. Which solution meets these requirements?

- A.** Enable an AWS WAF web ACL on the ALB, and configure rules to block traffic from unknown sources.
- B.** Subscribe to Amazon Inspector. Engage the AWS DDoS Response Team (DRT) to integrate mitigating controls into the service.
- C.** Subscribe to AWS Shield Advanced. Engage the AWS DDoS Response Team (DRT) to integrate mitigating controls into the service.
- D.** Create an Amazon CloudFront distribution for the application, and set the ALB as the origin. Enable an AWS WAF web ACL on the distribution, and configure rules to block traffic from unknown sources

Question #702

A company copies 200 TB of data from a recent ocean survey onto AWS Snowball Edge Storage Optimized devices. The company has a high performance computing (HPC) cluster that is hosted on AWS to look for oil and gas deposits. A solutions architect must provide the cluster with consistent sub-millisecond latency and high-throughput access to the data on the Snowball Edge Storage Optimized devices. The company is sending the devices back to AWS. Which solution will meet these requirements?

- A.** Create an Amazon S3 bucket. Import the data into the S3 bucket. Configure an AWS Storage Gateway file gateway to use the S3 bucket. Access the file gateway from the HPC cluster instances.
- B.** Create an Amazon S3 bucket. Import the data into the S3 bucket. Configure an Amazon FSx for Lustre file system, and integrate it with the S3 bucket. Access the FSx for Lustre file system from the HPC cluster instances.
- C.** Create an Amazon S3 bucket and an Amazon Elastic File System (Amazon EFS) file system. Import the data into the S3 bucket. Copy the data from the S3 bucket to the EFS file system. Access the EFS file system from the HPC cluster instances.
- D.** Create an Amazon FSx for Lustre file system. Import the data directly into the FSx for Lustre file system. Access the FSx for Lustre file system from the HPC cluster instances.

Question #703

A company has NFS servers in an on-premises data center that need to periodically back up small amounts of data to Amazon S3. Which solution meets these requirements and is MOST cost-effective?

- A.** Set up AWS Glue to copy the data from the on-premises servers to Amazon S3.
- B.** Set up an AWS DataSync agent on the on-premises servers, and sync the data to Amazon S3.
- C.** Set up an SFTP sync using AWS Transfer for SFTP to sync data from on premises to Amazon S3.
- D.** Set up an AWS Direct Connect connection between the on-premises data center and a VPC, and copy the data to Amazon S3.

Question #704

An online video game company must maintain ultra-low latency for its game servers. The game servers run on Amazon EC2 instances. The company needs a solution that can handle millions of UDP internet traffic requests each second. Which solution will meet these requirements MOST cost-effectively?

- A.** Configure an Application Load Balancer with the required protocol and ports for the internet traffic. Specify the EC2 instances as the targets.
- B.** Configure a Gateway Load Balancer for the internet traffic. Specify the EC2 instances as the targets.
- C.** Configure a Network Load Balancer with the required protocol and ports for the internet traffic. Specify the EC2 instances as the targets.
- D.** Launch an identical set of game servers on EC2 instances in separate AWS Regions. Route internet traffic to both sets of EC2 instances.

Question #705

A company runs a three-tier application in a VPC. The database tier uses an Amazon RDS for MySQL DB instance. The company plans to migrate the RDS for MySQL DB instance to an Amazon Aurora PostgreSQL DB cluster. The company needs a solution that replicates the data changes that happen during the migration to the new database. Which combination of steps will meet these requirements? (Choose two.)

- A.** Use AWS Database Migration Service (AWS DMS) Schema Conversion to transform the database objects.
- B.** Use AWS Database Migration Service (AWS DMS) Schema Conversion to create an Aurora PostgreSQL read replica on the RDS for MySQL DB instance.
- C.** Configure an Aurora MySQL read replica for the RDS for MySQL DB instance.
- D.** Define an AWS Database Migration Service (AWS DMS) task with change data capture (CDC) to migrate the data.
- E.** Promote the Aurora PostgreSQL read replica to a standalone Aurora PostgreSQL DB cluster when the replica lag is zero.

Question #706

A company hosts a database that runs on an Amazon RDS instance that is deployed to multiple Availability Zones. The company periodically runs a script against the database to report new entries that are added to the database. The script that runs against the database negatively affects the performance of a critical application. The company needs to improve application performance with minimal costs. Which solution will meet these requirements with the LEAST operational overhead?

- A.** Add functionality to the script to identify the instance that has the fewest active connections. Configure the script to read from that instance to report the total new entries.
- B.** Create a read replica of the database. Configure the script to query only the read replica to report the total new entries.
- C.** Instruct the development team to manually export the new entries for the day in the database at the end of each day.
- D.** Use Amazon ElastiCache to cache the common queries that the script runs against the database.

Question #707

A company is using an Application Load Balancer (ALB) to present its application to the internet. The company finds abnormal traffic access patterns across the application. A solutions architect needs to improve visibility into the infrastructure to help the company understand these abnormalities better. What is the MOST operationally efficient solution that meets these requirements?

- A.** Create a table in Amazon Athena for AWS CloudTrail logs. Create a query for the relevant information.
- B.** Enable ALB access logging to Amazon S3. Create a table in Amazon Athena, and query the logs.
- C.** Enable ALB access logging to Amazon S3. Open each file in a text editor, and search each line for the relevant information.
- D.** Use Amazon EMR on a dedicated Amazon EC2 instance to directly query the ALB to acquire traffic access log information.

Question #708

A company wants to use NAT gateways in its AWS environment. The company's Amazon EC2 instances in private subnets must be able to connect to the public internet through the NAT gateways. Which solution will meet these requirements?

- A.** Create public NAT gateways in the same private subnets as the EC2 instances.
- B.** Create private NAT gateways in the same private subnets as the EC2 instances.
- C.** Create public NAT gateways in public subnets in the same VPCs as the EC2 instances.
- D.** Create private NAT gateways in public subnets in the same VPCs as the EC2 instances.

Question #709

A company has an organization in AWS Organizations. The company runs Amazon EC2 instances across four AWS accounts in the root organizational unit (OU). There are three nonproduction accounts and one production account. The company wants to prohibit users from launching EC2 instances of a certain size in the nonproduction accounts. The company has created a service control policy (SCP) to deny access to launch instances that use the prohibited types. Which solutions to deploy the SCP will meet these requirements? (Choose two.)

- A.** Attach the SCP to the root OU for the organization.
- B.** Attach the SCP to the three nonproduction Organizations member accounts.
- C.** Attach the SCP to the Organizations management account.
- D.** Create an OU for the production account. Attach the SCP to the O
- U.** Move the production member account into the new O
- U.**
- E.** Create an OU for the required accounts. Attach the SCP to the O
- U.** Move the nonproduction member accounts into the new OU.

Question #710

A company's website hosted on Amazon EC2 instances processes classified data stored in Amazon S3. Due to security concerns, the company requires a private and secure connection between its EC2 resources and Amazon S3. Which solution meets these requirements?

- A.** Set up S3 bucket policies to allow access from a VPC endpoint.
- B.** Set up an IAM policy to grant read-write access to the S3 bucket.
- C.** Set up a NAT gateway to access resources outside the private subnet.
- D.** Set up an access key ID and a secret access key to access the S3 bucket.

Question #711

An ecommerce company runs its application on AWS. The application uses an Amazon Aurora PostgreSQL cluster in Multi-AZ mode for the underlying database. During a recent promotional campaign, the application experienced heavy read load and write load. Users experienced timeout issues when they attempted to access the application. A solutions architect needs to make the application architecture more scalable and highly available. Which solution will meet these requirements with the LEAST downtime?

- A.** Create an Amazon EventBridge rule that has the Aurora cluster as a source. Create an AWS Lambda function to log the state change events of the Aurora cluster. Add the Lambda function as a target for the EventBridge rule. Add additional reader nodes to fail over to.
- B.** Modify the Aurora cluster and activate the zero-downtime restart (ZDR) feature. Use Database Activity Streams on the cluster to track the cluster status.
- C.** Add additional reader instances to the Aurora cluster. Create an Amazon RDS Proxy target group for the Aurora cluster.
- D.** Create an Amazon ElastiCache for Redis cache. Replicate data from the Aurora cluster to Redis by using AWS Database Migration Service (AWS DMS) with a write-around approach.

Question #712

A company is designing a web application on AWS. The application will use a VPN connection between the company's existing data centers and the company's VPCs. The company uses Amazon Route 53 as its DNS service. The application must use private DNS records to communicate with the on-premises services from a VPC. Which solution will meet these requirements in the MOST secure manner?

- A.** Create a Route 53 Resolver outbound endpoint. Create a resolver rule. Associate the resolver rule with the VP
- C.
- B.** Create a Route 53 Resolver inbound endpoint. Create a resolver rule. Associate the resolver rule with the VP
- C.
- C.** Create a Route 53 private hosted zone. Associate the private hosted zone with the VP
- C.
- D.** Create a Route 53 public hosted zone. Create a record for each service to allow service communication

Question #713

A company is running a photo hosting service in the us-east-1 Region. The service enables users across multiple countries to upload and view photos. Some photos are heavily viewed for months, and others are viewed for less than a week. The application allows uploads of up to 20 MB for each photo. The service uses the photo metadata to determine which photos to display to each user. Which solution provides the appropriate user access MOST cost-effectively?

- A.** Store the photos in Amazon DynamoD
- B.** Turn on DynamoDB Accelerator (DAX) to cache frequently viewed items.
- B.** Store the photos in the Amazon S3 Intelligent-Tiering storage class. Store the photo metadata and its S3 location in DynamoD
- B.**
- C.** Store the photos in the Amazon S3 Standard storage class. Set up an S3 Lifecycle policy to move photos older than 30 days to the S3 Standard-Infrequent Access (S3 Standard-IA) storage class. Use the object tags to keep track of metadata.
- D.** Store the photos in the Amazon S3 Glacier storage class. Set up an S3 Lifecycle policy to move photos older than 30 days to the S3 Glacier Deep Archive storage class. Store the photo metadata and its S3 location in Amazon OpenSearch Service.

Question #714

A company runs a highly available web application on Amazon EC2 instances behind an Application Load Balancer. The company uses Amazon CloudWatch metrics. As the traffic to the web application increases, some EC2 instances become overloaded with many outstanding requests. The CloudWatch metrics show that the number of requests processed and the time to receive the responses from some EC2 instances are both higher compared to other EC2 instances. The company does not want new requests to be forwarded to the EC2 instances that are already overloaded. Which solution will meet these requirements?

- A.** Use the round robin routing algorithm based on the RequestCountPerTarget and ActiveConnectionCount CloudWatch metrics.
- B.** Use the least outstanding requests algorithm based on the RequestCountPerTarget and ActiveConnectionCount CloudWatch metrics.
- C.** Use the round robin routing algorithm based on the RequestCount and TargetResponseTime CloudWatch metrics.
- D.** Use the least outstanding requests algorithm based on the RequestCount and TargetResponseTime CloudWatch metrics.

Question #715

A company uses Amazon EC2, AWS Fargate, and AWS Lambda to run multiple workloads in the company's AWS account. The company wants to fully make use of its Compute Savings Plans. The company wants to receive notification when coverage of the Compute Savings Plans drops. Which solution will meet these requirements with the MOST operational efficiency?

- A.** Create a daily budget for the Savings Plans by using AWS Budgets. Configure the budget with a coverage threshold to send notifications to the appropriate email message recipients.
- B.** Create a Lambda function that runs a coverage report against the Savings Plans. Use Amazon Simple Email Service (Amazon SES) to email the report to the appropriate email message recipients.
- C.** Create an AWS Budgets report for the Savings Plans budget. Set the frequency to daily.
- D.** Create a Savings Plans alert subscription. Enable all notification options. Enter an email address to receive notifications.

Question #716

A company runs a real-time data ingestion solution on AWS. The solution consists of the most recent version of Amazon Managed Streaming for Apache Kafka (Amazon MSK). The solution is deployed in a VPC in private subnets across three Availability Zones. A solutions architect needs to redesign the data ingestion solution to be publicly available over the internet. The data in transit must also be encrypted. Which solution will meet these requirements with the MOST operational efficiency?

- A.** Configure public subnets in the existing VPC
- C.** Deploy an MSK cluster in the public subnets. Update the MSK cluster security settings to enable mutual TLS authentication.
- B.** Create a new VPC that has public subnets. Deploy an MSK cluster in the public subnets. Update the MSK cluster security settings to enable mutual TLS authentication.
- C.** Deploy an Application Load Balancer (ALB) that uses private subnets. Configure an ALB security group inbound rule to allow inbound traffic from the VPC CIDR block for HTTPS protocol.
- D.** Deploy a Network Load Balancer (NLB) that uses private subnets. Configure an NLB listener for HTTPS communication over the internet.

Question #717

A company wants to migrate an on-premises legacy application to AWS. The application ingests customer order files from an on-premises enterprise resource planning (ERP) system. The application then uploads the files to an SFTP server. The application uses a scheduled job that checks for order files every hour. The company already has an AWS account that has connectivity to the on-premises network. The new application on AWS must support integration with the existing ERP system. The new application must be secure and resilient and must use the SFTP protocol to process orders from the ERP system immediately. Which solution will meet these requirements?

- A.** Create an AWS Transfer Family SFTP internet-facing server in two Availability Zones. Use Amazon S3 storage. Create an AWS Lambda function to process order files. Use S3 Event Notifications to send s3:ObjectCreated:* events to the Lambda function.
- B.** Create an AWS Transfer Family SFTP internet-facing server in one Availability Zone. Use Amazon Elastic File System (Amazon EFS) storage. Create an AWS Lambda function to process order files. Use a Transfer Family managed workflow to invoke the Lambda function.
- C.** Create an AWS Transfer Family SFTP internal server in two Availability Zones. Use Amazon Elastic File System (Amazon EFS) storage. Create an AWS Step Functions state machine to process order files. Use Amazon EventBridge Scheduler to invoke the state machine to periodically check Amazon EFS for order files.
- D.** Create an AWS Transfer Family SFTP internal server in two Availability Zones. Use Amazon S3 storage. Create an AWS Lambda function to process order files. Use a Transfer Family managed workflow to invoke the Lambda function.

Question #718

A company's applications use Apache Hadoop and Apache Spark to process data on premises. The existing infrastructure is not scalable and is complex to manage. A solutions architect must design a scalable solution that reduces operational complexity. The solution must keep the data processing on premises. Which solution will meet these requirements?

- A.** Use AWS Site-to-Site VPN to access the on-premises Hadoop Distributed File System (HDFS) data and application. Use an Amazon EMR cluster to process the data.
- B.** Use AWS DataSync to connect to the on-premises Hadoop Distributed File System (HDFS) cluster. Create an Amazon EMR cluster to process the data.
- C.** Migrate the Apache Hadoop application and the Apache Spark application to Amazon EMR clusters on AWS Outposts. Use the EMR clusters to process the data.
- D.** Use an AWS Snowball device to migrate the data to an Amazon S3 bucket. Create an Amazon EMR cluster to process the data.

Question #719

A company is migrating a large amount of data from on-premises storage to AWS. Windows, Mac, and Linux based Amazon EC2 instances in the same AWS Region will access the data by using SMB and NFS storage protocols. The company will access a portion of the data routinely. The company will access the remaining data infrequently. The company needs to design a solution to host the data. Which solution will meet these requirements with the LEAST operational overhead?

- A.** Create an Amazon Elastic File System (Amazon EFS) volume that uses EFS Intelligent-Tiering. Use AWS DataSync to migrate the data to the EFS volume.
- B.** Create an Amazon FSx for ONTAP instance. Create an FSx for ONTAP file system with a root volume that uses the auto tiering policy. Migrate the data to the FSx for ONTAP volume.
- C.** Create an Amazon S3 bucket that uses S3 Intelligent-Tiering. Migrate the data to the S3 bucket by using an AWS Storage Gateway Amazon S3 File Gateway.
- D.** Create an Amazon FSx for OpenZFS file system. Migrate the data to the new volume.

Question #720

A manufacturing company runs its report generation application on AWS. The application generates each report in about 20 minutes. The application is built as a monolith that runs on a single Amazon EC2 instance. The application requires frequent updates to its tightly coupled modules. The application becomes complex to maintain as the company adds new features. Each time the company patches a software module, the application experiences downtime. Report generation must restart from the beginning after any interruptions. The company wants to redesign the application so that the application can be flexible, scalable, and gradually improved. The company wants to minimize application downtime. Which solution will meet these requirements?

- A.** Run the application on AWS Lambda as a single function with maximum provisioned concurrency.
- B.** Run the application on Amazon EC2 Spot Instances as microservices with a Spot Fleet default allocation strategy.
- C.** Run the application on Amazon Elastic Container Service (Amazon ECS) as microservices with service auto scaling.
- D.** Run the application on AWS Elastic Beanstalk as a single application environment with an all-at-once deployment strategy.

Question #721

A company wants to rearchitect a large-scale web application to a serverless microservices architecture. The application uses Amazon EC2 instances and is written in Python. The company selected one component of the web application to test as a microservice. The component supports hundreds of requests each second. The company wants to create and test the microservice on an AWS solution that supports Python. The solution must also scale automatically and require minimal infrastructure and minimal operational support. Which solution will meet these requirements?

- A.** Use a Spot Fleet with auto scaling of EC2 instances that run the most recent Amazon Linux operating system.
- B.** Use an AWS Elastic Beanstalk web server environment that has high availability configured.
- C.** Use Amazon Elastic Kubernetes Service (Amazon EKS). Launch Auto Scaling groups of self-managed EC2 instances.
- D.** Use an AWS Lambda function that runs custom developed code.

Question #722

A company has an AWS Direct Connect connection from its on-premises location to an AWS account. The AWS account has 30 different VPCs in the same AWS Region. The VPCs use private virtual interfaces (VIFs). Each VPC has a CIDR block that does not overlap with other networks under the company's control. The company wants to centrally manage the networking architecture while still allowing each VPC to communicate with all other VPCs and on-premises networks. Which solution will meet these requirements with the LEAST amount of operational overhead?

- A.** Create a transit gateway, and associate the Direct Connect connection with a new transit VIF
- F.** Turn on the transit gateway's route propagation feature.
- B.** Create a Direct Connect gateway. Recreate the private VIFs to use the new gateway. Associate each VPC by creating new virtual private gateways.
- C.** Create a transit VPCConnect the Direct Connect connection to the transit VPC. Create a peering connection between all other VPCs in the Region. Update the route tables.
- D.** Create AWS Site-to-Site VPN connections from on premises to each VPC
- C.** Ensure that both VPN tunnels are UP for each connection. Turn on the route propagation feature.

Question #723

A company has applications that run on Amazon EC2 instances. The EC2 instances connect to Amazon RDS databases by using an IAM role that has associated policies. The company wants to use AWS Systems Manager to patch the EC2 instances without disrupting the running applications. Which solution will meet these requirements?

- A.** Create a new IAM role. Attach the AmazonSSMManagedInstanceCore policy to the new IAM role. Attach the new IAM role to the EC2 instances and the existing IAM role.
- B.** Create an IAM user. Attach the AmazonSSMManagedInstanceCore policy to the IAM user. Configure Systems Manager to use the IAM user to manage the EC2 instances.
- C.** Enable Default Host Configuration Management in Systems Manager to manage the EC2 instances.
- D.** Remove the existing policies from the existing IAM role. Add the AmazonSSMManagedInstanceCore policy to the existing IAM role.

Question #724

A company runs container applications by using Amazon Elastic Kubernetes Service (Amazon EKS) and the Kubernetes Horizontal Pod Autoscaler. The workload is not consistent throughout the day. A solutions architect notices that the number of nodes does not automatically scale out when the existing nodes have reached maximum capacity in the cluster, which causes performance issues. Which solution will resolve this issue with the LEAST administrative overhead?

- A.** Scale out the nodes by tracking the memory usage.
- B.** Use the Kubernetes Cluster Autoscaler to manage the number of nodes in the cluster.
- C.** Use an AWS Lambda function to resize the EKS cluster automatically.
- D.** Use an Amazon EC2 Auto Scaling group to distribute the workload.

Question #725

A company maintains about 300 TB in Amazon S3 Standard storage month after month. The S3 objects are each typically around 50 GB in size and are frequently replaced with multipart uploads by their global application. The number and size of S3 objects remain constant, but the company's S3 storage costs are increasing each month. How should a solutions architect reduce costs in this situation?

- A.** Switch from multipart uploads to Amazon S3 Transfer Acceleration.
- B.** Enable an S3 Lifecycle policy that deletes incomplete multipart uploads.
- C.** Configure S3 inventory to prevent objects from being archived too quickly.
- D.** Configure Amazon CloudFront to reduce the number of objects stored in Amazon S3.

Question #726

A company has deployed a multiplayer game for mobile devices. The game requires live location tracking of players based on latitude and longitude. The data store for the game must support rapid updates and retrieval of locations. The game uses an Amazon RDS for PostgreSQL DB instance with read replicas to store the location data. During peak usage periods, the database is unable to maintain the performance that is needed for reading and writing updates. The game's user base is increasing rapidly. What should a solutions architect do to improve the performance of the data tier?

- A.** Take a snapshot of the existing DB instance. Restore the snapshot with Multi-AZ enabled.
- B.** Migrate from Amazon RDS to Amazon OpenSearch Service with OpenSearch Dashboards.
- C.** Deploy Amazon DynamoDB Accelerator (DAX) in front of the existing DB instance. Modify the game to use DA X.
- D.** Deploy an Amazon ElastiCache for Redis cluster in front of the existing DB instance. Modify the game to use Redis.

Question #727

A company stores critical data in Amazon DynamoDB tables in the company's AWS account. An IT administrator accidentally deleted a DynamoDB table. The deletion caused a significant loss of data and disrupted the company's operations. The company wants to prevent this type of disruption in the future. Which solution will meet this requirement with the LEAST operational overhead?

- A.** Configure a trail in AWS CloudTrail. Create an Amazon EventBridge rule for delete actions. Create an AWS Lambda function to automatically restore deleted DynamoDB tables.
- B.** Create a backup and restore plan for the DynamoDB tables. Recover the DynamoDB tables manually.
- C.** Configure deletion protection on the DynamoDB tables.
- D.** Enable point-in-time recovery on the DynamoDB tables.

Question #728

A company has an on-premises data center that is running out of storage capacity. The company wants to migrate its storage infrastructure to AWS while minimizing bandwidth costs. The solution must allow for immediate retrieval of data at no additional cost. How can these requirements be met?

- A.** Deploy Amazon S3 Glacier Vault and enable expedited retrieval. Enable provisioned retrieval capacity for the workload.
- B.** Deploy AWS Storage Gateway using cached volumes. Use Storage Gateway to store data in Amazon S3 while retaining copies of frequently accessed data subsets locally.
- C.** Deploy AWS Storage Gateway using stored volumes to store data locally. Use Storage Gateway to asynchronously back up point-in-time snapshots of the data to Amazon S3.
- D.** Deploy AWS Direct Connect to connect with the on-premises data center. Configure AWS Storage Gateway to store data locally. Use Storage Gateway to asynchronously back up point-in-time snapshots of the data to Amazon S3.

Question #729

A company runs a three-tier web application in a VPC across multiple Availability Zones. Amazon EC2 instances run in an Auto Scaling group for the application tier. The company needs to make an automated scaling plan that will analyze each resource's daily and weekly historical workload trends. The configuration must scale resources appropriately according to both the forecast and live changes in utilization. Which scaling strategy should a solutions architect recommend to meet these requirements?

- A.** Implement dynamic scaling with step scaling based on average CPU utilization from the EC2 instances.
- B.** Enable predictive scaling to forecast and scale. Configure dynamic scaling with target tracking
- C.** Create an automated scheduled scaling action based on the traffic patterns of the web application.
- D.** Set up a simple scaling policy. Increase the cooldown period based on the EC2 instance startup time.

Question #730

A package delivery company has an application that uses Amazon EC2 instances and an Amazon Aurora MySQL DB cluster. As the application becomes more popular, EC2 instance usage increases only slightly. DB cluster usage increases at a much faster rate. The company adds a read replica, which reduces the DB cluster usage for a short period of time. However, the load continues to increase. The operations that cause the increase in DB cluster usage are all repeated read statements that are related to delivery details. The company needs to alleviate the effect of repeated reads on the DB cluster. Which solution will meet these requirements MOST cost-effectively?

- A.** Implement an Amazon ElastiCache for Redis cluster between the application and the DB cluster.
- B.** Add an additional read replica to the DB cluster.
- C.** Configure Aurora Auto Scaling for the Aurora read replicas.
- D.** Modify the DB cluster to have multiple writer instances.

Question #731

A company has an application that uses an Amazon DynamoDB table for storage. A solutions architect discovers that many requests to the table are not returning the latest data. The company's users have not reported any other issues with database performance. Latency is in an acceptable range. Which design change should the solutions architect recommend?

- A.** Add read replicas to the table.
- B.** Use a global secondary index (GSI).
- C.** Request strongly consistent reads for the table.
- D.** Request eventually consistent reads for the table.

Question #732

A company has deployed its application on Amazon EC2 instances with an Amazon RDS database. The company used the principle of least privilege to configure the database access credentials. The company's security team wants to protect the application and the database from SQL injection and other web-based attacks. Which solution will meet these requirements with the LEAST operational overhead?

- A.** Use security groups and network ACLs to secure the database and application servers.
- B.** Use AWS WAF to protect the application. Use RDS parameter groups to configure the security settings.
- C.** Use AWS Network Firewall to protect the application and the database.
- D.** Use different database accounts in the application code for different functions. Avoid granting excessive privileges to the database users.

Question #733

An ecommerce company runs applications in AWS accounts that are part of an organization in AWS Organizations. The applications run on Amazon Aurora PostgreSQL databases across all the accounts. The company needs to prevent malicious activity and must identify abnormal failed and incomplete login attempts to the databases. Which solution will meet these requirements in the MOST operationally efficient way?

- A.** Attach service control policies (SCPs) to the root of the organization to identify the failed login attempts.
- B.** Enable the Amazon RDS Protection feature in Amazon GuardDuty for the member accounts of the organization.
- C.** Publish the Aurora general logs to a log group in Amazon CloudWatch Logs. Export the log data to a central Amazon S3 bucket.
- D.** Publish all the Aurora PostgreSQL database events in AWS CloudTrail to a central Amazon S3 bucket.

Question #734

A company has an AWS Direct Connect connection from its corporate data center to its VPC in the us-east-1 Region. The company recently acquired a corporation that has several VPCs and a Direct Connect connection between its on-premises data center and the eu-west-2 Region. The CIDR blocks for the VPCs of the company and the corporation do not overlap. The company requires connectivity between two Regions and the data centers. The company needs a solution that is scalable while reducing operational overhead. What should a solutions architect do to meet these requirements?

- A.** Set up inter-Region VPC peering between the VPC in us-east-1 and the VPCs in eu-west-2.
- B.** Create private virtual interfaces from the Direct Connect connection in us-east-1 to the VPCs in eu-west-2.
- C.** Establish VPN appliances in a fully meshed VPN network hosted by Amazon EC2. Use AWS VPN CloudHub to send and receive data between the data centers and each VP
- D.** Connect the existing Direct Connect connection to a Direct Connect gateway. Route traffic from the virtual private gateways of the VPCs in each Region to the Direct Connect gateway.

Question #735

A company is developing a mobile game that streams score updates to a backend processor and then posts results on a leaderboard. A solutions architect needs to design a solution that can handle large traffic spikes, process the mobile game updates in order of receipt, and store the processed updates in a highly available database. The company also wants to minimize the management overhead required to maintain the solution. What should the solutions architect do to meet these requirements?

- A.** Push score updates to Amazon Kinesis Data Streams. Process the updates in Kinesis Data Streams with AWS Lambda. Store the processed updates in Amazon DynamoD
- B.**
- B.** Push score updates to Amazon Kinesis Data Streams. Process the updates with a fleet of Amazon EC2 instances set up for Auto Scaling. Store the processed updates in Amazon Redshift.
- C.** Push score updates to an Amazon Simple Notification Service (Amazon SNS) topic. Subscribe an AWS Lambda function to the SNS topic to process the updates. Store the processed updates in a SQL database running on Amazon EC2.
- D.** Push score updates to an Amazon Simple Queue Service (Amazon SQS) queue. Use a fleet of Amazon EC2 instances with Auto Scaling to process the updates in the SQS queue. Store the processed updates in an Amazon RDS Multi-AZ DB instance.

Question #736

A company has multiple AWS accounts with applications deployed in the us-west-2 Region. Application logs are stored within Amazon S3 buckets in each account. The company wants to build a centralized log analysis solution that uses a single S3 bucket. Logs must not leave us-west-2, and the company wants to incur minimal operational overhead. Which solution meets these requirements and is MOST cost-effective?

- A.** Create an S3 Lifecycle policy that copies the objects from one of the application S3 buckets to the centralized S3 bucket.
- B.** Use S3 Same-Region Replication to replicate logs from the S3 buckets to another S3 bucket in us-west-2. Use this S3 bucket for log analysis.
- C.** Write a script that uses the PutObject API operation every day to copy the entire contents of the buckets to another S3 bucket in us-west-2. Use this S3 bucket for log analysis.
- D.** Write AWS Lambda functions in these accounts that are triggered every time logs are delivered to the S3 buckets (s3:ObjectCreated:* event). Copy the logs to another S3 bucket in us-west-2. Use this S3 bucket for log analysis.

Question #737

A company has an application that delivers on-demand training videos to students around the world. The application also allows authorized content developers to upload videos. The data is stored in an Amazon S3 bucket in the us-east-2 Region. The company has created an S3 bucket in the eu-west-2 Region and an S3 bucket in the ap-southeast-1 Region. The company wants to replicate the data to the new S3 buckets. The company needs to minimize latency for developers who upload videos and students who stream videos near eu-west-2 and ap-southeast-1. Which combination of steps will meet these requirements with the FEWEST changes to the application? (Choose two.)

- A.** Configure one-way replication from the us-east-2 S3 bucket to the eu-west-2 S3 bucket. Configure one-way replication from the us-east-2 S3 bucket to the ap-southeast-1 S3 bucket.
- B.** Configure one-way replication from the us-east-2 S3 bucket to the eu-west-2 S3 bucket. Configure one-way replication from the eu-west-2 S3 bucket to the ap-southeast-1 S3 bucket.
- C.** Configure two-way (bidirectional) replication among the S3 buckets that are in all three Regions.
- D.** Create an S3 Multi-Region Access Point. Modify the application to use the Amazon Resource Name (ARN) of the Multi- Region Access Point for video streaming. Do not modify the application for video uploads.
- E.** Create an S3 Multi-Region Access Point. Modify the application to use the Amazon Resource Name (ARN) of the Multi- Region Access Point for video streaming and uploads.

Question #738

A company has a new mobile app. Anywhere in the world, users can see local news on topics they choose. Users also can post photos and videos from inside the app. Users access content often in the first minutes after the content is posted. New content quickly replaces older content, and then the older content disappears. The local nature of the news means that users consume 90% of the content within the AWS Region where it is uploaded. Which solution will optimize the user experience by providing the LOWEST latency for content uploads?

- A.** Upload and store content in Amazon S3. Use Amazon CloudFront for the uploads.
- B.** Upload and store content in Amazon S3. Use S3 Transfer Acceleration for the uploads.
- C.** Upload content to Amazon EC2 instances in the Region that is closest to the user. Copy the data to Amazon S3.
- D.** Upload and store content in Amazon S3 in the Region that is closest to the user. Use multiple distributions of Amazon CloudFront.

Question #739

A company is building a new application that uses serverless architecture. The architecture will consist of an Amazon API Gateway REST API and AWS Lambda functions to manage incoming requests. The company wants to add a service that can send messages received from the API Gateway REST API to multiple target Lambda functions for processing. The service must offer message filtering that gives the target Lambda functions the ability to receive only the messages the functions need. Which solution will meet these requirements with the LEAST operational overhead?

- A.** Send the requests from the API Gateway REST API to an Amazon Simple Notification Service (Amazon SNS) topic. Subscribe Amazon Simple Queue Service (Amazon SQS) queues to the SNS topic. Configure the target Lambda functions to poll the different SQS queues.
- B.** Send the requests from the API Gateway REST API to Amazon EventBridge. Configure EventBridge to invoke the target Lambda functions.
- C.** Send the requests from the API Gateway REST API to Amazon Managed Streaming for Apache Kafka (Amazon MSK). Configure Amazon MSK to publish the messages to the target Lambda functions.
- D.** Send the requests from the API Gateway REST API to multiple Amazon Simple Queue Service (Amazon SQS) queues. Configure the target Lambda functions to poll the different SQS queues.

Question #740

A company migrated millions of archival files to Amazon S3. A solutions architect needs to implement a solution that will encrypt all the archival data by using a customer-provided key. The solution must encrypt existing unencrypted objects and future objects. Which solution will meet these requirements?

- A.** Create a list of unencrypted objects by filtering an Amazon S3 Inventory report. Configure an S3 Batch Operations job to encrypt the objects from the list with a server-side encryption with a customer-provided key (SSE-C). Configure the S3 default encryption feature to use a server-side encryption with a customer-provided key (SSE-C).
- B.** Use S3 Storage Lens metrics to identify unencrypted S3 buckets. Configure the S3 default encryption feature to use a server-side encryption with AWS KMS keys (SSE-KMS).
- C.** Create a list of unencrypted objects by filtering the AWS usage report for Amazon S3. Configure an AWS Batch job to encrypt the objects from the list with a server-side encryption with AWS KMS keys (SSE-KMS). Configure the S3 default encryption feature to use a server-side encryption with AWS KMS keys (SSE-KMS).
- D.** Create a list of unencrypted objects by filtering the AWS usage report for Amazon S3. Configure the S3 default encryption feature to use a server-side encryption with a customer-provided key (SSE-C).

Question #741

The DNS provider that hosts a company's domain name records is experiencing outages that cause service disruption for a website running on AWS. The company needs to migrate to a more resilient managed DNS service and wants the service to run on AWS. What should a solutions architect do to rapidly migrate the DNS hosting service?

- A.** Create an Amazon Route 53 public hosted zone for the domain name. Import the zone file containing the domain records hosted by the previous provider.
- B.** Create an Amazon Route 53 private hosted zone for the domain name. Import the zone file containing the domain records hosted by the previous provider.
- C.** Create a Simple AD directory in AW
- S.** Enable zone transfer between the DNS provider and AWS Directory Service for Microsoft Active Directory for the domain records.
- D.** Create an Amazon Route 53 Resolver inbound endpoint in the VP
- C.** Specify the IP addresses that the provider's DNS will forward DNS queries to. Configure the provider's DNS to forward DNS queries for the domain to the IP addresses that are specified in the inbound endpoint.

Question #742

A company is building an application on AWS that connects to an Amazon RDS database. The company wants to manage the application configuration and to securely store and retrieve credentials for the database and other services. Which solution will meet these requirements with the LEAST administrative overhead?

- A.** Use AWS AppConfig to store and manage the application configuration. Use AWS Secrets Manager to store and retrieve the credentials.
- B.** Use AWS Lambda to store and manage the application configuration. Use AWS Systems Manager Parameter Store to store and retrieve the credentials.
- C.** Use an encrypted application configuration file. Store the file in Amazon S3 for the application configuration. Create another S3 file to store and retrieve the credentials.
- D.** Use AWS AppConfig to store and manage the application configuration. Use Amazon RDS to store and retrieve the credentials.

Question #743

To meet security requirements, a company needs to encrypt all of its application data in transit while communicating with an Amazon RDS MySQL DB instance. A recent security audit revealed that encryption at rest is enabled using AWS Key Management Service (AWS KMS), but data in transit is not enabled. What should a solutions architect do to satisfy the security requirements?

- A.** Enable IAM database authentication on the database.
- B.** Provide self-signed certificates. Use the certificates in all connections to the RDS instance.
- C.** Take a snapshot of the RDS instance. Restore the snapshot to a new instance with encryption enabled.
- D.** Download AWS-provided root certificates. Provide the certificates in all connections to the RDS instance.

Question #744

A company is designing a new web service that will run on Amazon EC2 instances behind an Elastic Load Balancing (ELB) load balancer. However, many of the web service clients can only reach IP addresses authorized on their firewalls. What should a solutions architect recommend to meet the clients' needs?

- A.** A Network Load Balancer with an associated Elastic IP address.
- B.** An Application Load Balancer with an associated Elastic IP address.
- C.** An A record in an Amazon Route 53 hosted zone pointing to an Elastic IP address.
- D.** An EC2 instance with a public IP address running as a proxy in front of the load balancer.

Question #745

A company has established a new AWS account. The account is newly provisioned and no changes have been made to the default settings. The company is concerned about the security of the AWS account root user. What should be done to secure the root user?

- A.** Create IAM users for daily administrative tasks. Disable the root user.
- B.** Create IAM users for daily administrative tasks. Enable multi-factor authentication on the root user.
- C.** Generate an access key for the root user. Use the access key for daily administration tasks instead of the AWS Management Console.
- D.** Provide the root user credentials to the most senior solutions architect. Have the solutions architect use the root user for daily administration tasks.

Question #746

A company is deploying an application that processes streaming data in near-real time. The company plans to use Amazon EC2 instances for the workload. The network architecture must be configurable to provide the lowest possible latency between nodes. Which combination of network solutions will meet these requirements? (Choose two.)

- A.** Enable and configure enhanced networking on each EC2 instance.
- B.** Group the EC2 instances in separate accounts.
- C.** Run the EC2 instances in a cluster placement group.
- D.** Attach multiple elastic network interfaces to each EC2 instance.
- E.** Use Amazon Elastic Block Store (Amazon EBS) optimized instance types.

Question #747

A financial services company wants to shut down two data centers and migrate more than 100 TB of data to AWS. The data has an intricate directory structure with millions of small files stored in deep hierarchies of subfolders. Most of the data is unstructured, and the company's file storage consists of SMB-based storage types from multiple vendors. The company does not want to change its applications to access the data after migration. What should a solutions architect do to meet these requirements with the LEAST operational overhead?

- A.** Use AWS Direct Connect to migrate the data to Amazon S3.
- B.** Use AWS DataSync to migrate the data to Amazon FSx for Lustre.
- C.** Use AWS DataSync to migrate the data to Amazon FSx for Windows File Server.
- D.** Use AWS Direct Connect to migrate the data on-premises file storage to an AWS Storage Gateway volume gateway.

Question #748

A company uses an organization in AWS Organizations to manage AWS accounts that contain applications. The company sets up a dedicated monitoring member account in the organization. The company wants to query and visualize observability data across the accounts by using Amazon CloudWatch. Which solution will meet these requirements?

- A.** Enable CloudWatch cross-account observability for the monitoring account. Deploy an AWS CloudFormation template provided by the monitoring account in each AWS account to share the data with the monitoring account.
- B.** Set up service control policies (SCPs) to provide access to CloudWatch in the monitoring account under the Organizations root organizational unit (OU).
- C.** Configure a new IAM user in the monitoring account. In each AWS account, configure an IAM policy to have access to query and visualize the CloudWatch data in the account. Attach the new IAM policy to the new IAM user.
- D.** Create a new IAM user in the monitoring account. Create cross-account IAM policies in each AWS account. Attach the IAM policies to the new IAM user.

Question #749

A company's website is used to sell products to the public. The site runs on Amazon EC2 instances in an Auto Scaling group behind an Application Load Balancer (ALB). There is also an Amazon CloudFront distribution, and AWS WAF is being used to protect against SQL injection attacks. The ALB is the origin for the CloudFront distribution. A recent review of security logs revealed an external malicious IP that needs to be blocked from accessing the website. What should a solutions architect do to protect the application?

- A.** Modify the network ACL on the CloudFront distribution to add a deny rule for the malicious IP address.
- B.** Modify the configuration of AWS WAF to add an IP match condition to block the malicious IP address.
- C.** Modify the network ACL for the EC2 instances in the target groups behind the ALB to deny the malicious IP address.
- D.** Modify the security groups for the EC2 instances in the target groups behind the ALB to deny the malicious IP address.

Question #750

A company sets up an organization in AWS Organizations that contains 10 AWS accounts. A solutions architect must design a solution to provide access to the accounts for several thousand employees. The company has an existing identity provider (IdP). The company wants to use the existing IdP for authentication to AWS. Which solution will meet these requirements?

- A.** Create IAM users for the employees in the required AWS accounts. Connect IAM users to the existing Id
- P.** Configure federated authentication for the IAM users.
- B.** Set up AWS account root users with user email addresses and passwords that are synchronized from the existing Id
- P.**
- C.** Configure AWS IAM Identity Center (AWS Single Sign-On). Connect IAM Identity Center to the existing Id
- P.** Provision users and groups from the existing Id
- P.**
- D.** Use AWS Resource Access Manager (AWS RAM) to share access to the AWS accounts with the users in the existing IdP.

Question #751

A solutions architect is designing an AWS Identity and Access Management (IAM) authorization model for a company's AWS account. The company has designated five specific employees to have full access to AWS services and resources in the AWS account. The solutions architect has created an IAM user for each of the five designated employees and has created an IAM user group. Which solution will meet these requirements?

- A.** Attach the AdministratorAccess resource-based policy to the IAM user group. Place each of the five designated employee IAM users in the IAM user group.
- B.** Attach the SystemAdministrator identity-based policy to the IAM user group. Place each of the five designated employee IAM users in the IAM user group.
- C.** Attach the AdministratorAccess identity-based policy to the IAM user group. Place each of the five designated employee IAM users in the IAM user group.
- D.** Attach the SystemAdministrator resource-based policy to the IAM user group. Place each of the five designated employee IAM users in the IAM user group.

Question #752

A company has a multi-tier payment processing application that is based on virtual machines (VMs). The communication between the tiers occurs asynchronously through a third-party middleware solution that guarantees exactly-once delivery. The company needs a solution that requires the least amount of infrastructure management. The solution must guarantee exactly- once delivery for application messaging. Which combination of actions will meet these requirements? (Choose two.)

- A.** Use AWS Lambda for the compute layers in the architecture.
- B.** Use Amazon EC2 instances for the compute layers in the architecture.
- C.** Use Amazon Simple Notification Service (Amazon SNS) as the messaging component between the compute layers.
- D.** Use Amazon Simple Queue Service (Amazon SQS) FIFO queues as the messaging component between the compute layers.
- E.** Use containers that are based on Amazon Elastic Kubernetes Service (Amazon EKS) for the compute layers in the architecture.

Question #753

A company has a nightly batch processing routine that analyzes report files that an on-premises file system receives daily through SFTP. The company wants to move the solution to the AWS Cloud. The solution must be highly available and resilient. The solution also must minimize operational effort. Which solution meets these requirements?

- A.** Deploy AWS Transfer for SFTP and an Amazon Elastic File System (Amazon EFS) file system for storage. Use an Amazon EC2 instance in an Auto Scaling group with a scheduled scaling policy to run the batch operation.
- B.** Deploy an Amazon EC2 instance that runs Linux and an SFTP service. Use an Amazon Elastic Block Store (Amazon EBS) volume for storage. Use an Auto Scaling group with the minimum number of instances and desired number of instances set to 1.
- C.** Deploy an Amazon EC2 instance that runs Linux and an SFTP service. Use an Amazon Elastic File System (Amazon EFS) file system for storage. Use an Auto Scaling group with the minimum number of instances and desired number of instances set to 1.
- D.** Deploy AWS Transfer for SFTP and an Amazon S3 bucket for storage. Modify the application to pull the batch files from Amazon S3 to an Amazon EC2 instance for processing. Use an EC2 instance in an Auto Scaling group with a scheduled scaling policy to run the batch operation.

Question #754

A company has users all around the world accessing its HTTP-based application deployed on Amazon EC2 instances in multiple AWS Regions. The company wants to improve the availability and performance of the application. The company also wants to protect the application against common web exploits that may affect availability, compromise security, or consume excessive resources. Static IP addresses are required. What should a solutions architect recommend to accomplish this?

- A.** Put the EC2 instances behind Network Load Balancers (NLBs) in each Region. Deploy AWS WAF on the NLBs. Create an accelerator using AWS Global Accelerator and register the NLBs as endpoints.
- B.** Put the EC2 instances behind Application Load Balancers (ALBs) in each Region. Deploy AWS WAF on the ALBs. Create an accelerator using AWS Global Accelerator and register the ALBs as endpoints.
- C.** Put the EC2 instances behind Network Load Balancers (NLBs) in each Region. Deploy AWS WAF on the NLBs. Create an Amazon CloudFront distribution with an origin that uses Amazon Route 53 latency-based routing to route requests to the NLBs.
- D.** Put the EC2 instances behind Application Load Balancers (ALBs) in each Region. Create an Amazon CloudFront distribution with an origin that uses Amazon Route 53 latency-based routing to route requests to the ALBs. Deploy AWS WAF on the CloudFront distribution.

Question #755

A company's data platform uses an Amazon Aurora MySQL database. The database has multiple read replicas and multiple DB instances across different Availability Zones. Users have recently reported errors from the database that indicate that there are too many connections. The company wants to reduce the failover time by 20% when a read replica is promoted to primary writer. Which solution will meet this requirement?

- A.** Switch from Aurora to Amazon RDS with Multi-AZ cluster deployment.
- B.** Use Amazon RDS Proxy in front of the Aurora database.
- C.** Switch to Amazon DynamoDB with DynamoDB Accelerator (DAX) for read connections.
- D.** Switch to Amazon Redshift with relocation capability.

Question #756

A company stores text files in Amazon S3. The text files include customer chat messages, date and time information, and customer personally identifiable information (PII). The company needs a solution to provide samples of the conversations to an external service provider for quality control. The external service provider needs to randomly pick sample conversations up to the most recent conversation. The company must not share the customer PII with the external service provider. The solution must scale when the number of customer conversations increases. Which solution will meet these requirements with the LEAST operational overhead?

- A.** Create an Object Lambda Access Point. Create an AWS Lambda function that redacts the PII when the function reads the file. Instruct the external service provider to access the Object Lambda Access Point.
- B.** Create a batch process on an Amazon EC2 instance that regularly reads all new files, redacts the PII from the files, and writes the redacted files to a different S3 bucket. Instruct the external service provider to access the bucket that does not contain the PII.
- C.** Create a web application on an Amazon EC2 instance that presents a list of the files, redacts the PII from the files, and allows the external service provider to download new versions of the files that have the PII redacted.
- D.** Create an Amazon DynamoDB table. Create an AWS Lambda function that reads only the data in the files that does not contain PII.
- E.** Configure the Lambda function to store the non-PII data in the DynamoDB table when a new file is written to Amazon S3. Grant the external service provider access to the DynamoDB table.

Question #757

A company is running a legacy system on an Amazon EC2 instance. The application code cannot be modified, and the system cannot run on more than one instance. A solutions architect must design a resilient solution that can improve the recovery time for the system. What should the solutions architect recommend to meet these requirements?

- A.** Enable termination protection for the EC2 instance.
- B.** Configure the EC2 instance for Multi-AZ deployment.
- C.** Create an Amazon CloudWatch alarm to recover the EC2 instance in case of failure.
- D.** Launch the EC2 instance with two Amazon Elastic Block Store (Amazon EBS) volumes that use RAID configurations for storage redundancy.

Question #758

A company wants to deploy its containerized application workloads to a VPC across three Availability Zones. The company needs a solution that is highly available across Availability Zones. The solution must require minimal changes to the application. Which solution will meet these requirements with the LEAST operational overhead?

- A.** Use Amazon Elastic Container Service (Amazon ECS). Configure Amazon ECS Service Auto Scaling to use target tracking scaling. Set the minimum capacity to 3. Set the task placement strategy type to spread with an Availability Zone attribute.
- B.** Use Amazon Elastic Kubernetes Service (Amazon EKS) self-managed nodes. Configure Application Auto Scaling to use target tracking scaling. Set the minimum capacity to 3.
- C.** Use Amazon EC2 Reserved Instances. Launch three EC2 instances in a spread placement group. Configure an Auto Scaling group to use target tracking scaling. Set the minimum capacity to 3.
- D.** Use an AWS Lambda function. Configure the Lambda function to connect to a VP
- C.** Configure Application Auto Scaling to use Lambda as a scalable target. Set the minimum capacity to 3.

Question #759

A media company stores movies in Amazon S3. Each movie is stored in a single video file that ranges from 1 GB to 10 GB in size. The company must be able to provide the streaming content of a movie within 5 minutes of a user purchase. There is higher demand for movies that are less than 20 years old than for movies that are more than 20 years old. The company wants to minimize hosting service costs based on demand. Which solution will meet these requirements?

- A.** Store all media content in Amazon S3. Use S3 Lifecycle policies to move media data into the Infrequent Access tier when the demand for a movie decreases.
- B.** Store newer movie video files in S3 Standard. Store older movie video files in S3 Standard-infrequent Access (S3 Standard- IA). When a user orders an older movie, retrieve the video file by using standard retrieval.
- C.** Store newer movie video files in S3 Intelligent-Tiering. Store older movie video files in S3 Glacier Flexible Retrieval. When a user orders an older movie, retrieve the video file by using expedited retrieval.
- D.** Store newer movie video files in S3 Standard. Store older movie video files in S3 Glacier Flexible Retrieval. When a user orders an older movie, retrieve the video file by using bulk retrieval.

Question #760

A solutions architect needs to design the architecture for an application that a vendor provides as a Docker container image. The container needs 50 GB of storage available for temporary files. The infrastructure must be serverless. Which solution meets these requirements with the LEAST operational overhead?

- A.** Create an AWS Lambda function that uses the Docker container image with an Amazon S3 mounted volume that has more than 50 GB of space.
- B.** Create an AWS Lambda function that uses the Docker container image with an Amazon Elastic Block Store (Amazon EBS) volume that has more than 50 GB of space.
- C.** Create an Amazon Elastic Container Service (Amazon ECS) cluster that uses the AWS Fargate launch type. Create a task definition for the container image with an Amazon Elastic File System (Amazon EFS) volume. Create a service with that task definition.
- D.** Create an Amazon Elastic Container Service (Amazon ECS) cluster that uses the Amazon EC2 launch type with an Amazon Elastic Block Store (Amazon EBS) volume that has more than 50 GB of space. Create a task definition for the container image. Create a service with that task definition.

Question #761

A company needs to use its on-premises LDAP directory service to authenticate its users to the AWS Management Console. The directory service is not compatible with Security Assertion Markup Language (SAML). Which solution meets these requirements?

- A.** Enable AWS IAM Identity Center (AWS Single Sign-On) between AWS and the on-premises LDA
P.
- B.** Create an IAM policy that uses AWS credentials, and integrate the policy into LDA
P.
- C.** Set up a process that rotates the IAM credentials whenever LDAP credentials are updated.
- D.** Develop an on-premises custom identity broker application or process that uses AWS Security Token Service (AWS STS) to get short-lived credentials.

Question #762

A company stores multiple Amazon Machine Images (AMIs) in an AWS account to launch its Amazon EC2 instances. The AMIs contain critical data and configurations that are necessary for the company's operations. The company wants to implement a solution that will recover accidentally deleted AMIs quickly and efficiently. Which solution will meet these requirements with the LEAST operational overhead?

- A.** Create Amazon Elastic Block Store (Amazon EBS) snapshots of the AMIs. Store the snapshots in a separate AWS account.
- B.** Copy all AMIs to another AWS account periodically.
- C.** Create a retention rule in Recycle Bin.
- D.** Upload the AMIs to an Amazon S3 bucket that has Cross-Region Replication.

Question #763

A company has 150 TB of archived image data stored on-premises that needs to be moved to the AWS Cloud within the next month. The company's current network connection allows up to 100 Mbps uploads for this purpose during the night only. What is the MOST cost-effective mechanism to move this data and meet the migration deadline?

- A. Use AWS Snowmobile to ship the data to AWS.
- B. Order multiple AWS Snowball devices to ship the data to AWS.
- C. Enable Amazon S3 Transfer Acceleration and securely upload the data.
- D. Create an Amazon S3 VPC endpoint and establish a VPN to upload the data.

Question #764

A company wants to migrate its three-tier application from on premises to AWS. The web tier and the application tier are running on third-party virtual machines (VMs). The database tier is running on MySQL. The company needs to migrate the application by making the fewest possible changes to the architecture. The company also needs a database solution that can restore data to a specific point in time. Which solution will meet these requirements with the LEAST operational overhead?

- A.** Migrate the web tier and the application tier to Amazon EC2 instances in private subnets. Migrate the database tier to Amazon RDS for MySQL in private subnets.
- B.** Migrate the web tier to Amazon EC2 instances in public subnets. Migrate the application tier to EC2 instances in private subnets. Migrate the database tier to Amazon Aurora MySQL in private subnets.
- C.** Migrate the web tier to Amazon EC2 instances in public subnets. Migrate the application tier to EC2 instances in private subnets. Migrate the database tier to Amazon RDS for MySQL in private subnets.
- D.** Migrate the web tier and the application tier to Amazon EC2 instances in public subnets. Migrate the database tier to Amazon Aurora MySQL in public subnets.

Question #765

A development team is collaborating with another company to create an integrated product. The other company needs to access an Amazon Simple Queue Service (Amazon SQS) queue that is contained in the development team's account. The other company wants to poll the queue without giving up its own account permissions to do so. How should a solutions architect provide access to the SQS queue?

- A.** Create an instance profile that provides the other company access to the SQS queue.
- B.** Create an IAM policy that provides the other company access to the SQS queue.
- C.** Create an SQS access policy that provides the other company access to the SQS queue.
- D.** Create an Amazon Simple Notification Service (Amazon SNS) access policy that provides the other company access to the SQS queue.