https://www.examdiscuss.com/Amazon/exam/AWS-Solutions-Associate/premium/

Q  133/218

**How many g2.2xlarge on-demand instances can a user run in one region without taking any limit increase approval from AWS?**

**A.** 20

**B.** 2

**C.** 5

**D.** 10

**Correct Answer: C**

Generally, AWS EC2 allows running 20 on-demand instances and 100 spot instances at a time. This limit can be increased by requesting at https://aws.amazon.com/contact-us/ec2-request. Excluding certain types of instances, the limit is lower than mentioned above. For g2.2xlarge, the user can run only 5 on-demand instance at a time.  
http://docs.aws.amazon.com/general/latest/gr/aws\_service\_limits.html#limits\_ec2

Q 134/218

**A company is preparing to deploy a data lake on AWS A solutions architect must define the encryption strategy for data at rest in Amazon S3. The company's security policy states  
\* Keys must be rotated every 90 days  
\* Strict separation of duties between key users and key administrators must be implemented  
\* Auditing key usage must be possible  
What should the solutions architect recommend?**

**A.** Server-side encryption with Amazon S3 managed keys (SSE-S3) with customer managed customer master keys (CMKs)

**B.** Server-side encryption with AWS KMS managed keys (SSE-KMS) with AWS managed customer master keys (CMKs)

**C.** Server-side encryption with AWS KMS managed keys (SSE-KMS) with customer managed customer master keys (CMKs)

**D.** Server-side encryption with Amazon S3 managed keys (SSE-S3) with AWS managed customer master keys (CMKs)

**Correct Answer: B**

Q 135/218

**A retail company runs hourly flash sales and has a performance issue on its Amazon RDS for PostgreSOL database. The Database Administrators have identified that the issue with performance happens when finance and marketing employees refresh sales dashboards that are used for reporting real-time sales data.  
What should be done to resolve the issue without impacting performance?**

**A.** Move data from the RDS PostgreSQL database to Amazon Redshift nightly and point the dashboards at Amazon Redshift.

**B.** Monitor the database with Amazon CloudWatch and increase the instance size, as necessary Make no changes to the dashboards.

**C.** Create a Read Replica of the RDS PostgreSOL database and point the dashboards at the Read Replica

**D.** Take an hourly snapshot of the RDS PostgreSOL database, and load the hourly snapshots to another database to which the dashboards are pointed

**Correct Answer: C**

Q  136/218

**In regard to DynamoDB, for which one of the following parameters does Amazon not charge you?**

**A.** Storage cost

**B.** I/O usage within the same Region

**C.** Cost per provisioned read units

**D.** Cost per provisioned write units

**Correct Answer: B**

In DynamoDB, you will be charged for the storage and the throughput you use rather than for the I/O which has been used.  
http://aws.amazon.com/dynamodb/pricing/

Q 137/218

**You Auto Scaling group is configured to launch one new Amazon EC2 instance if the overall CPU load exceeds 65% over a five-minute interval. Occasionally, the Auto Scaling group launches a second Amazon EC2 instance before the first is operational. The second instance is not required and introduces needless compute costs. How can you prevent the Auto Scaling group from launching the second instance?**

**A.** Configure a lifecycle hook for your Auto Scaling group

**B.** Add a scaling-specific cooldown period to the scaling policy

**C.** Attach a new launch configuration to the Auto Scaling group

**D.** Adjust the CPU threshold that triggers a scaling action

**Correct Answer: B**

Q 138/218

**A company uses a legacy on-premises analytics application that operates on gigabytes of .csv files and represents months of data. The legacy application cannot handle the growing size of .csv files. New .csv files are added daily from various data sources to a central on-premises storage location. The company wants to continue to support the legacy application while users learn AWS analytics services. To achieve this, a solutions architect wants to maintain two synchronized copies of all the .csv files on-premises and in Amazon S3.  
Which solution should the solutions architect recommend?**

**A.** Deploy AWS DataSync on-premises. Configure DataSync to continuously replicate the .csv files between on-premises and Amazon Elastic File System (Amazon EFS). Enable replication from Amazon EFS to the company's S3 bucket.

**B.** Deploy an on-premises file gateway. Configure data sources to write the .csv files to the file gateway. Point the legacy analytics application to the file gateway. The file gateway should replicate the .csv files to Amazon S3.

**C.** Deploy AWS DataSync on-premises. Configure DataSync to continuously replicate the .csv files between the company's on-premises storage and the company's S3 bucket.

**D.** Deploy an on-premises volume gateway. Configure data sources to write the .csv files to the volume gateway. Point the legacy analytics application to the volume gateway. The volume gateway should replicate data to Amazon S3.

**Correct Answer: B**

Q 139/218

**Is it possible to load data from Amazon DynamoDB into Amazon Redshift?**

**A.** No, you cannot load all the data from DynamoDB table to a Redshift table as it limited by size constraints.

**B.** No

**C.** No, DynamoDB data types do not correspond directly with those of Amazon Redshift.

**D.** Yes

**Correct Answer: D**

Explanation/Reference:  
Explanation:  
Yes. When you copy data from an Amazon DynamoDB table into Amazon Redshift, you can perform complex data analysis queries on that data. This includes joins with other tables in your Amazon Redshift cluster.  
http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/RedshiftforDynamoDB.html

Q 140/218

**A web application is hosted in a dedicated VPC that is connected to a company's on-premises data center over a Site-to-Site VPN connection. The application is accessible from the company network only. This is a temporary non-production application that is used during business hours. The workload is generally low with occasional surges.  
The application has an Amazon Aurora MySQL provisioned database cluster on the backend. The VPC has an internet gateway and a NAT gateways attached. The web servers are in private subnets in an Auto Scaling group behind an Elastic Load Balancer. The web servers also upload data to an Amazon S3 bucket through the internet.  
A solutions architect needs to reduce operational costs and simplify the architecture.  
Which strategy should the solutions architect use?**

**A.** Review the Auto Scaling group settings and ensure the scheduled actions are specified to operate the Amazon EC2 instances during business hours only. Detach the internet gateway and remove the NAT gateways from the VPC. Use an Aurora Serverless database and set up a VPC endpoint for the S3 bucket, then update the network routing and security rules and policies related to the changes.

**B.** Review the Auto Scaling group settings and ensure the scheduled actions are specified to operate the Amazon EC2 instances during business hours only. Use 3-year scheduled Reserved Instances for the web server EC2 instances. Detach the internet gateway and remove the NAT gateways from the VPC.  
Use an Aurora Serverless database and set up a VPC endpoint for the S3 bucket.

**C.** Use 3-year scheduled Reserved Instances for the web server Amazon EC2 instances. Remove the NAT gateways from the VPC, and set up a VPC endpoint for the S3 bucket. Use Amazon CloudWatch and AWS Lambda to stop and start the Aurora DB cluster so it operates during business hours only.  
Update the network routing and security rules and policies related to the changes.

**D.** Review the Auto Scaling group settings and ensure the scheduled actions are specified to operate the Amazon EC2 instances during business hours only. Detach the internet gateway from the VPC, and use an Aurora Serverless database. Set up a VPC endpoint for the S3 bucket, then update the network routing and security rules and policies related to the changes.

**Correct Answer: D**

Q  141/218

**A company is performing an AWS Well-Architected Framework review of an existing workload deployed on AWS. The review identified a public-facing website running on the same Amazon EC2 instance as a Microsoft Active Directory domain controller that was install recently to support other AWS services. A solutions architect needs to recommend a new design that would improve the security of the architecture and minimize the administrative demand on IT staff.  
What should the solutions architect recommend?**

**A.** Use AWS Directory Service to create a managed Active Directory. Uninstall Active Directory on the current EC2 instance.

**B.** Create another EC2 instance in the same subnet and reinstall Active Directory on it. Uninstall Active Directory.

**C.** Use AWS Directory Service to create an Active Directory connector. Proxy Active Directory requests to the Active domain controller running on the current EC2 instance.

**D.** Enable AWS Single Sign-On (AWS SSO) with Security Assertion Markup Language (SAML) 2.0 federation with the current Active Directory controller. Modify the EC2 instance's security group to deny public access to Active Directory.

**Correct Answer: A**

Explanation  
AWS Managed Microsoft AD  
AWS Directory Service lets you run Microsoft Active Directory (AD) as a managed service. AWS Directory Service for Microsoft Active Directory, also referred to as AWS Managed Microsoft AD, is powered by Windows Server 2012 R2. When you select and launch this directory type, it is created as a highly available pair of domain controllers connected to your virtual private cloud (VPC). The domain controllers run in different Availability Zones in a region of your choice. Host monitoring and recovery, data replication, snapshots, and software updates are automatically configured and managed for you.  
https://docs.aws.amazon.com/directoryservice/latest/admin-guide/directory\_microsoft\_ad.html

Q 142/218

**A company is migrating to the AWS Cloud. A file server is the first workload to migrate. Users must be able to access the file share using the Server Message Block (SMB) protocol. Which AWS managed service meets these requirements?**

**A.** Amazon S3

**B.** Amazon EBS

**C.** Amazon EC2

**D.** Amazon FSx

**Correct Answer: D**

Q 143/218

**In DynamoDB, "The data is eventually consistent" means that\_\_\_\_\_\_\_\_\_\_.**

**A.** a read request immediately after a write operation might not show the latest change.

**B.** a read request immediately after a write operation shows the latest change.

**C.** a write request immediately after a read operation might cause data loss.

**D.** a read request immediately after a write operation might cause data loss.

**Correct Answer: A**

Explanation/Reference:  
Explanation:  
In DynamoDB, it takes time for the update to propagate to all copies. The data is eventually consistent, meaning that a read request immediately after a write operation might not show the latest change.  
http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/APISummary.html

Q 144/218

**A Solutions Architect is designing an API that will use Amazon API Gateway, which is backed by AWS Lambda. The Lambda function is not running inside a VPC and will query Amazon DunamoDB to get the results. The user will include the ItemId request parameter in the URL query string as the key to retrieve the data. The Solutions Architect analysed the traffic patter and has noticed that customers are sending repeated queries to get the same information. The Solution Architect wants to implement a caching to reduce the load on the database and improve query latency.  
What should the Solution Architect do to implement a caching solution?**

**A.** in API Gateway, add an additional Cute-Control: only-if -cached header before sending the request to Lambda

**B.** In API Gateway, enable caching based on the item id query parameter

**C.** In Amazon ElastiCache. store previously retrieved requests and query the cluster before querying the database.

**D.** In Lambda, use/tmp as the cache directory to store previously retrieved requests

**Correct Answer: B**

Q  145/218

**Which Auto Scaling features allow you to scale ahead of expected increases in load?  
Choose 2 answers**

**A.** Lifecycle hooks

**B.** Cooldown period

**C.** Scheduled scaling

**D.** Health check grace period

**E.** Desired capacity

**F.** Metric-based scaling

**Correct Answer: C,E**

Q 146/218

**A Solutions Architect is designing an architecture for a mobile gaming application. The application is expected to be very popular. The Architect needs to prevent the Amazon ROS MySQL database from becoming a bottleneck due to frequently accessed queries.  
Which service or feature should the Architect add to prevent a bottleneck?**

**A.** Amazon SQS in front of RDS MySQL Database

**B.** Multi-AZ feature on the RDS MySQL Database

**C.** ELB Classic Load Balancer in front of the web application tier.

**D.** Amazon ElastiCache in front of the RDS MySQL Database.

**Correct Answer: D**

Q 147/218

**If I want an instance to have a public IP address, which IP address should I use?**

**A.** Elastic I P Address

**B.** Dynamic IP Address

**C.** Class A IP Address

**D.** Class B IP Address

**Correct Answer: A**

Q 148/218

**A company needs to store data for 5 years. The company will need to have immediate and highly available access to the data at any point in time, but will not require frequent access.  
What lifecycle action should be taked to meet the requirements while reducing costs?**

**A.** Transition objects from Amazon S3 Standard to Amazon S3 Standard-Infrequent Access (S3 Standard-IA)

**B.** Transition objects from Amazon S3 Standard to Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA)

**C.** Transition objects to expire after 5 years.

**D.** Transition objects from Amazon S3 Standard to the GLACIER storage class.

**Correct Answer: A**

Q 149/218

**A company is running an online transaction processing (OLTP) workload on AWS This workload uses an unencrypted Amazon RDS DB instance in a Multi-AZ deployment Dairy database snapshots are taken from this instance What should a solutions architect do to ensure the database and snapshots are always encrypted moving forward?**

**A.** Encrypt a copy of the latest DB snapshot. Replace existing DB instance by restoring the encrypted snapshot

**B.** Copy the snapshots and enable encryption using AWS Key Management Service (AWS KMS) Restore encrypted snapshot to an existing DB instance

**C.** Create a new encrypted Amazon Elastic Block Store (Amazon EBS) volume and copy the snapshots to it Enable encryption on the DB instance

**D.** Copy the snapshots to an Amazon S3 bucket that is encrypted using server-side encryption with AWS Key Management Service (AWS KMS) managed keys (SSE-KMS)

**Correct Answer: B**

Q 150/218

**A company has implemented a self-managed DNS solution on three Amazon EC2 instances behind a Network Load Balancer (NLB) in the us-west-2 Region Most of the company's users are located in the United States and Europe The company wants to improve the performance and availability of the solution by using an AWS Region in Europe The company launches and configures three EC2 instances in the eu-west-1 Region and adds the EC2 instances as targets for a new NLB Which solutions will allow traffic to be routed to all the EC2 instances? (Select TWO )**

**A.** Create an Amazon Route 53 geoiocatton routing policy to route requests to one of the two NLBs Create an Amazon CloudFront distribution Use the Route 53 record as the distribution's origin

**B.** Create a standard accelerator by using AWS Global Accelerator Create endpomt groups in us-west-2 and eu-west-1 Add the two NLBs as endpoints for the endpomt groups

**C.** Create a standard accelerator by using AWS Global Accelerator Create endpomt groups in us-west-2 and eu-west-1 Add the six EC2 instances directly as endpoints for the endpomt groups Delete the NLBs

**D.** Attach Elastic IP addresses to the six EC2 instances Create an Amazon Route 53 geolocation routing policy to route requests to one of the six EC2 instances Create an Amazon CloudFront distribution Use the Route 53 record as the distribution's ongin.

**E.** Replace the two NLBs with two Application Load Balancers (ALBs) Create an Amazon Route 53 latency routing policy to route requests to one of the two ALBs Create an Amazon CloudFront distribution Use the Route 53 record as the distribution's origin

**Correct Answer: A,E**

Q 151/218

**A company is preparing to deploy a data lake on AWS A solutions architect must define the encryption strategy tor data at rest m Amazon S3 The company's security policy states  
\* Keys must be rotated every 90 days  
\* Strict separation of duties between key users and key administrators must be implemented  
\* Auditing key usage must be possible  
What should the solutions architect recommend?**

**A.** Server-side encryption with AWS KMS managed keys (SSE-KMS) with AWS managed customer master keys (CMKs)

**B.** Server-side encryption with Amazon S3 managed keys (SSE-S3) with AWS managed customer master keys (CMKs)

**C.** Server-side encryption with AWS KMS managed keys (SSE-KMS) with customer managed customer master keys (CMKs)

**D.** Server-side encryption with Amazon S3 managed keys (SSE-S3) with customer managed customer master keys (CMKs)

**Correct Answer: C**

Q 153/218

**A company is deploying a new two-tier web application in AWS. The company has limited staff and requires high availability, and the application requires complex queries and table joins. Which configuration provides the solution for the company's requirements?**

**A.** MySQL Installed on two Amazon EC2 Instances in a single Availability Zone

**B.** Amazon ElastiCache

**C.** Amazon DynamoDB

**D.** Amazon RDS for MySQL with Multi-AZ

**Correct Answer: D**

Q 154/218

**A company is launching an application that it expects to be very popular. The company needs a database that can scale with the rest of the application. The schema will change frequently. The application cannot afford any downtime for database changes.  
Which AWS service allows the company to achieve these objectives?**

**A.** Amazon Redshift

**B.** Amazon Aurora

**C.** Amazon DynamoDB

**D.** Amazon RDS MySQL

**Correct Answer: C**

Q 155/218

**You need a persistent and durable storage to trace call activity of an IVR (Interactive Voice Response) system. Call duration is mostly in the 2-3 minutes timeframe. Each traced call can be either active or terminated. An external application needs to know each minute the list of currently active calls. Usually there are a few calls/second, but once per month there is a periodic peak up to 1000 calls/second for a few hours. The system is open 24/7 and any downtime should be avoided. Historical data is periodically archived to files. Cost saving is a priority for this project.  
What database implementation would better fit this scenario, keeping costs as low as possible?**

**A.** Use DynamoDB with a "Calls" table and a Global Secondary Index on a "State" attribute that can equal to "active" or "terminated". In this way the Global Secondary Index can be used for all items in the table.

**B.** Use RDS Multi-AZ with a "CALLS" table and an indexed "STATE" field that can be equal to "ACTIVE" or 'TERMINATED". In this way the SQL query is optimized by the use of the Index.

**C.** Use RDS Multi-AZ with two tables, one for "ACTIVE\_CALLS" and one for "TERMINATED\_CALLS". In this way the "ACTIVE\_CALLS" table is always small and effective to access.

**D.** Use DynamoDB with a "Calls" table and a Global Secondary Index on a "IsActive" attribute that is present for active calls only. In this way the Global Secondary Index is sparse and more effective.

**Correct Answer: D** Explanation:  
Q: Can a global secondary index key be defined on non-unique attributes?  
Yes. Unlike the primary key on a table, a GSI index does not require the indexed attributes to be unique.  
Q: Are GSI key attributes required in all items of a DynamoDB table?  
No. GSIs are sparse indexes. Unlike the requirement of having a primary key, an item in a DynamoDB table does not have to contain any of the GSI keys. If a GSI key has both hash and range elements, and a table item omits either of them, then that item will not be indexed by the corresponding GSI. In such cases, a GSI can be very useful in efficiently locating items that have an uncommon attribute.  
Reference: https://aws.amazon.com/dynamodb/faqs/

Q  156/218

**A company is using AWS to design a web application that will process insurance quotes Users will request quotes from the application Quotes must be separated by quote type, must be responded to within 24 hours, and must not get lost The solution must maximize operational efficiency and must minimize maintenance.  
Which solution meets these requirements?**

**A.** Create multiple Amazon Kinesis Data Firehose delivery streams based on the quote type to deliver data streams to an Amazon Elasucsearch Service (Amazon ES) cluster Configure the application to send messages to the proper delivery stream Configure each backend group of application servers to search for the messages from Amazon ES and process them accordingly

**B.** Create a single Amazon Simple Notification Service (Amazon SNS) topic Subscribe Amazon Simple Queue Service (Amazon SQS) queues to the SNS topic Configure SNS message filtering to publish messages to the proper SQS queue based on the quote type Configure each backend application server to use its own SQS queue

**C.** Create multiple Amazon Kinesis data streams based on the quote type Configure the web application to send messages to the proper data stream Configure each backend group of application servers to use the Kinesis Client Library (KCL) to pool messages from its own data stream

**D.** Create an AWS Lambda function and an Amazon Simple Notification Service (Amazon SNS) topic for each quote type Subscribe the Lambda function to its associated SNS topic Configure the application to publish requests tot quotes to the appropriate SNS topic

**Correct Answer: B**

Q 157/218

**Which Amazon service can I use to define a virtual network that closely resembles a traditional data center?**

**A.** Amazon Service Bus

**B.** Amazon VPC

**C.** Amazon RDS

**D.** Amazon EMR

**Correct Answer: B**

Q 158/218

**A company operates a website on Amazon EC2 Linux instances. Some of the instances are faring Troubleshooting points to insufficient swap space on the failed instances. The operations team lead needs a solution to monitor this.  
What should a solutions architect recommend?**

**A.** Configure an Amazon CloudWatch SwapUsage metric dimension. Monitor the SwapUsage dimension in the EC2 metrics in CloudWatch.

**B.** Use EC2 metadata to collect information, then publish it to Amazon CloudWatch custom metrics.  
Monitor SwapUsage metrics in CloudWatch.

**C.** Install an Amazon CloudWatch agent on the instances. Run an appropriate script on a set schedule.  
Monitor SwapUtilizalion metrics in CloudWatch.

**D.** Enable detailed monitoring in the EC2 console. Create an Amazon CloudWatch SwapUtilizalion custom metric. Monitor SwapUtilization metrics in CloudWatch.

**Correct Answer: B**

Q  159/218

**Some of the company's customers are retrieving records frequently, leading to an increase in costs for the company. The company wants to limit retrieved requests in the future. The company also wants to ensure that if one customer reaches its retrieval limit other customers will not affected.  
Which solution will meet these requirements?**

**A.** Set up a usage plan for API Gateway Implement throttling limits tor each customer. and distribute API keys to each customer

**B.** Set up server-side throttling limits for API Gateway.

**C.** Limit DynamoDB read throughput on the table lo an amount that results m the maximum cost that the company is willing to incur.

**D.** Set up AWS Budgets. Monitor the usage of API Gateway and DynamoDB Configure an alarm to provide an alert when the cost exceeds a certain threshold each month

**Correct Answer: D**

Q 160/218

**A company is investigating potential solutions to collect process, and store users' service usage data The company needs to create an analytics capability so that the company can use standard SQL queries to gather operational insights quickly. The solution must be highly available The solution also must ensure atomicity, consistency, isolation and durability (ACID) compliance in the data tier Which solution meets these requirements''**

**A.** Use a fully managed Amazon RDS for MySQL database in a Multi-AZ design

**B.** Use an Amazon Timestream database.

**C.** Deploy PostgreSQL on an Amazon EC2 instance that uses Amazon Elastic Block Store (Amazon EBS) Throughput Optimized HDD (st1) storage

**D.** Use an Amazon Neptune database in a Multi-AZ design

**Correct Answer: A**

Q 161/218

**A company needs to deploy services to an AWS region which they have not previously used. The company currently has an AWS identity and Access Management (IAM) role for the**[**Amazon EC2**](https://www.freecram.net/question/Amazon.AWS-Solutions-Associate.v2022-03-26.q218/a-company-needs-to-deploy-services-to-an-aws-region-which-they-have-not-previously-used-the-company)**instances, which permits the instance to have access to**[**Amazon DynamoDB**](https://www.freecram.net/question/Amazon.AWS-Solutions-Associate.v2022-03-26.q218/a-company-needs-to-deploy-services-to-an-aws-region-which-they-have-not-previously-used-the-company)**. The company wants their**[**EC2**](https://www.freecram.net/question/Amazon.AWS-Solutions-Associate.v2022-03-26.q218/a-company-needs-to-deploy-services-to-an-aws-region-which-they-have-not-previously-used-the-company)**instances in the new region to have the same privileges. How should the company achieve this?**

**A.** Copy the IAM role and associated policies to the new region and attach it to the instances

**B.** Create an Amazon Machine Image (AMI) of the instance and copy it to the desired region using the AMI Copy feature

**C.** Assign the existing IAM role to the Amazon EC2 instances in the new region

**D.** Create a new IAM role and associated policies within the new region

**Correct Answer: C**

Q 162/218

**Fill in the blanks: \_\_\_\_\_\_\_\_\_ let you categorize your EC2 resources in different ways, for example, by purpose, owner, or environment.**

**A.** wildcards

**B.** pointers

**C.** special filters

**D.** Tags

**Correct Answer: D**

Q 163/218

**A solutions architect wants all new users to have specific complexity requirements and mandatory rotation periods tor IAM user passwords What should the solutions architect do to accomplish this?**

**A.** Set an overall password policy for the entire AWS account

**B.** Attach an Amazon CloudWatch rule to the Create\_newuser event to set the password with the appropriate requirements

**C.** Set a password policy for each IAM user in the AWS account

**D.** Use third-party vendor software to set password requirements

**Correct Answer: A**

Q 164/218

**An organization is currently hosting a large amount of frequently accessed data consisting of key-value pairs and semi-structured documents in their data center. They are planning to move this data to AWS.  
Which of one of the following services MOST effectively meets their needs?**

**A.** Amazon Aurora

**B.** Amazon Redshift

**C.** Amazon RDS

**D.** Amazon DynamoDB

**Correct Answer: D**

Q 165/218

**A company has a legacy application that processes data in two parts. The second part of the process takes longer than the first, so the company has decided to rewrite the application as two microservices running on Amazon ECS that can scale independently How should a solutions architect integrate the microservices?**

**A.** Implement code in microservice 1 to send data to an Amazon S3 bucket. Use S3 event notifications to invoke microservice 2

**B.** Implement code in microservice 1 to publish data to an Amazon SNS topic. Implement code In microservice 2 to subscribe to this topic.

**C.** Implement code in microservice 1 to send data to Amazon Kinesis Data Firehose. Implement code in microservice 2 to read from Kinesis Data Firehose.

**D.** Implement code in microservice 1 to send data to an Amazon SQS queue. Implement code in microservice 2 to process messages from the queue.

**Correct Answer: D**

Q 166/218

**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 an SFTP sync using AWS Transfer for SFTP to sync data from on premises 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 AWS Glue to copy the data from the on-premises servers 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

**Correct Answer: A**

Q 167/218

**What does the "Server Side Encryption" option on Amazon S3 provide?**

**A.** It provides an encrypted virtual disk in the Cloud.

**B.** It allows to upload files using an SSL endpoint, for a secure transfer.

**C.** It doesn't exist for Amazon S3, but only for Amazon EC2.

**D.** It encrypts the files that you send to Amazon S3, on the server side.

**Correct Answer: A**

Q 168/218

**A company is migrating a three-tier application to AWS. The application requires a MySQL database. In the past, the application users reported poor application performance when creating new entries. These performance issues were caused by users generating different real-time reports from the application duringworking hours.  
Which solution will improve the performance of the application when it is moved to AWS?**

**A.** Import the data into an Amazon DynamoDB table with provisioned capacity. Refactor the application to use DynamoDB for reports.

**B.** Create the database on a compute optimized Amazon EC2 instance. Ensure compute resources exceed the on-premises database.

**C.** Create an Amazon Aurora MySQL Multi-AZ DB cluster with multiple read replicas. Configure the application reader endpoint for reports.

**D.** Create an Amazon Aurora MySQL Multi-AZ DB cluster. Configure the application to use the backup instance of the cluster as an endpoint for the reports.

**Correct Answer: D**

Explanation  
Amazon RDS Read Replicas Now Support Multi-AZ Deployments  
Starting today, Amazon RDS Read Replicas for MySQL and MariaDB now support Multi-AZ deployments.  
Combining Read Replicas with Multi-AZ enables you to build a resilient disaster recovery strategy and simplify your database engine upgrade process.  
Amazon RDS Read Replicas enable you to create one or more read-only copies of your database instance within the same AWS Region or in a different AWS Region. Updates made to the source database are then asynchronously copied to your Read Replicas. In addition to providing scalability for read-heavy workloads, Read Replicas can be promoted to become a standalone database instance when needed.  
Amazon RDS Multi-AZ deployments provide enhanced availability for database instances within a single AWS Region. With Multi-AZ, your data is synchronously replicated to a standby in a different Availability Zone (AZ). In the event of an infrastructure failure, Amazon RDS performs an automatic failover to the standby, minimizing disruption to your applications.  
You can now use Read Replicas with Multi-AZ as part of a disaster recovery (DR) strategy for your production databases. A well-designed and tested DR plan is critical for maintaining business continuity after a disaster. A Read Replica in a different region than the source database can be used as a standby database and promoted to become the new production database in case of a regional disruption.  
You can also combine Read Replicas with Multi-AZ for your database engine upgrade process. You can create a Read Replica of your production database instance and upgrade it to a new database engine version. When the upgrade is complete, you can stop applications, promote the Read Replica to a standalone database instance, and switch over your applications. Since the database instance is already a Multi-AZ deployment, no additional steps are needed.  
Overview of Amazon RDS Read Replicas  
Deploying one or more read replicas for a given source DB instance might make sense in a variety of scenarios, including the following:  
Scaling beyond the compute or I/O capacity of a single DB instance for read-heavy database workloads. You can direct this excess read traffic to one or more read replicas.  
Serving read traffic while the source DB instance is unavailable. In some cases, your source DB instance might not be able to take I/O requests, for example due to I/O suspension for backups or scheduled maintenance. In these cases, you can direct read traffic to your read replicas. For this use case, keep in mind that the data on the read replica might be "stale" because the source DB instance is unavailable.  
Business reporting or data warehousing scenarios where you might want business reporting queries to run against a read replica, rather than your primary, production DB instance.  
Implementing disaster recovery. You can promote a read replica to a standalone instance as a disaster recovery solution if the source DB instance fails.  
https://aws.amazon.com/about-aws/whats-new/2018/01/amazon-rds-read-replicas-now-support-multi-az-deploym  
https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER\_ReadRepl.html

Q 169/218

**You have setup an Auto Scaling group. The cool down period for the Auto Scaling group is 7 minutes. The first scaling activity request for the Auto Scaling group is to launch two instances. It receives the activity question at time "t", and the first instance is launched at t+3 minutes, while the second instance is launched at t+4 minutes.  
How many minutes after time "t" will Auto Scaling accept another scaling activity request?**

**A.** 11 minutes

**B.** 10 minutes

**C.** 7 minutes

**D.** 14 minutes

**Correct Answer: A**

If an Auto Scaling group is launching more than one instance, the cool down period for each instance starts after that instance is launched. The group remains locked until the last instance that was launched has completed its cool down period. In this case the cool down period for the first instance starts after 3 minutes and finishes at the 10th minute (3+7 cool down), while for the second instance it starts at the 4th minute and finishes at the 11th minute (4+7 cool down). Thus, the Auto Scaling group will receive another request only after 11 minutes.  
http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/AS\_Concepts.html

Q 170/218

**Any person or application that interacts with AWS requires security credentials. AWS uses these credentials to identify who is making the call and whether to allow the requested access. You have just set up a VPC network for a client and you are now thinking about the best way to secure this network. You set up a security group called vpcsecuritygroup. Which following statement is true in respect to the initial settings that will be applied to this security group if you choose to use the default settings for this group?**

**A.** Allow all inbound traffic and allow no outbound traffic.

**B.** Allow no inbound traffic and allow all outbound traffic.

**C.** Allow inbound traffic on port 80 only and allow all outbound traffic.

**D.** Allow all inbound traffic and allow all outbound traffic.

**Correct Answer: B Explantion** Amazon VPC provides advanced security features such as security groups and network access control lists to enable inbound and outbound filtering at the instance level and subnet level.  
AWS assigns each security group a unique ID in the form sg-xxxxxxxx. The following are the initial settings for a security group that you create:  
Allow no inbound traffic  
Allow all outbound traffic  
Reference: http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html

Q 171/218

**A pharmaceutical company is developing a new drug. The volume of data that the company generates has grown exponentially over the past few months. The company's researchers regularly require a subset of the entire dataset to be immediately available with minimal lag. However, the entire dataset does not need to be accessed on a daily basis. All the data currently resides in on-premises storage arrays, and the company wants to reduce ongoing capital expenses.  
Which storage solution should a solutions architect recommend to meet these requirements?**

**A.** Configure an AWS Site-to-Site VPN connection from the on-premises environment to AWS. Migrate data to an Amazon Elastic File System (Amazon EFS) file system.

**B.** Deploy an AWS Storage Gateway file gateway with an Amazon S3 bucket as the target storage. Migrate the data to the Storage Gateway appliance.

**C.** Run AWS DataSync as a scheduled cron job to migrate the data to an Amazon S3 bucket on an ongoing basis.

**D.** Deploy an AWS Storage Gateway volume gateway with cached volumes with an Amazon S3 bucket as the target storage. Migrate the data to the Storage Gateway appliance.

**Correct Answer: D**

Q  172/218

**A solution architect is performing a security review of a recently migrated workload. The workload is a web application that consists of amazon EC2 instances in an Auto Scaling group behind an Application Load balancer. The solution architect must improve the security posture and minimize the impact of a DDoS attack on resources.  
Which solution is MOST effective?**

**A.** Enable Amazon GuardDuty and , configure findings written 10 Amazon GloudWatch Create an event with Cloud Watch Events for DDoS alerts that triggers Amazon Simple Notification Service (Amazon SNS) Have Amazon SNS invoke a custom AWS lambda function that parses the logs looking for a DDoS attack Modify a network ACL to block identified source IP addresses

**B.** Create a custom AWS Lambda function that adds identified attacks into a common vulnerability pool to capture a potential DDoS attack. use the identified information to modify a network ACL to block access.

**C.** Configure an AWS WAF ACL with rate-based rules Create an Amazon CloudFront distribution that points to the Application Load Balancer. Enable the EAF ACL on the CloudFront distribution

**D.** Enable VPC Flow Logs and store then in Amazon S3. Create a custom AWS Lambda functions that parses the logs looking for a DDoS attack. Modify a network ACL to block identified source IP addresses.

**Correct Answer: B**

Q 173/218

**A company wants to automate the security assessment of its Amazon EC2 instances. The company needs to validate and demonstrate that security and compliance standards are being followed throughout the development process What should a solutions architect do to meet these requirements?**

**A.** Use Amazon Inspector with Amazon CloudWatch to publish Amazon Simple Notification Service (Amazon SNS) notifications

**B.** Use Amazon EventBridge (Amazon CloudWatch Events) to detect and react to changes in the status of AWS Trusted Advisor checks

**C.** Use Amazon GuardDuty to publish Amazon Simple Notification Service (Amazon SNS) notifications.

**D.** Use Amazon Macie to automatically discover, classify and protect the EC2 instances

**Correct Answer: A**

Q  174/218

**A client notices that their engineers often make mistakes when creating Amazon SQS queues for their backend system.  
Which action should a Solutions Architect recommend to improve this process?**

**A.** Write a script to create the Amazon SQS queue using AWS Lambda.

**B.** Use AWS Elastic Beanstalk to automatically create the Amazon SQS queues.

**C.** Use the AWS CLI to create queues using AWS IAM Access Keys.

**D.** Use AWS CloudFormation Templates to manage the Amazon SQS queue creation

**Correct Answer: D**

Q  175/218

**What does the following command do with respect to the Amazon EC2 security groups?  
ec2-revoke RevokeSecurityGroupIngress**

**A.** Removes one or more rules from a security group.

**B.** Removes one or more security groups from an Amazon EC2 instance.

**C.** Removes one or more security groups from a rule.

**D.** Removes a security group from our account.

**Correct Answer: A**

Q 176/218

**A company wants to migrate its MySQL database from on premises to AWS. The company recently experienced a database outage that significantly impacted the business. To ensure this does not happen again, the company wants a reliable database solution on AWS that minimizes data loss and stores every transaction on at least two nodes.  
Which solution meets these requirements?**

**A.** Create an Amazon RDS MySQL DB instance with Multi-AZ functionality enabled to synchronously replicate the data

**B.** Create an Amazon EC2 instance with a MySQL engine installed that triggers an AWS Lambda function to synchronously replicate the data to an Amazon RDS MySQL DB instance.

**C.** Create an Amazon RDS MySQL DB instance and then create a read replica in a separate AWS Region that synchronously replicates the data.

**D.** Create an Amazon RDS DB instance with synchronous replication to three nodes in three Availability Zones.

**Correct Answer: D**

Q 177/218

**A company currently has 250 TB of backup files stored in Amazon S3 in a vendor's proprietary format. Using a Linux-based software application provided by the vendor, the company wants to retrieve files from Amazon S3, transform the files to an industry-standard format, and re-upload them to Amazon S3. The company wants to minimize the data transfer charges associated with this conversation.  
What should a solution architect do to accomplish this?**

**A.** Install the conversion software as an Amazon S3 batch operation so the data is transformed without leaving Amazon S3.

**B.** Install the conversion software onto an on-premises virtual machines. Perform the transformation and re-upload the files to Amazon S3 from the virtual machine.

**C.** Use AWS Snowball Edge device to expert the data and install the conversion software onto the devices.  
Perform the data transformation and re-upload the files to Amazon S3 from the Snowball devices.

**D.** Launch an Amazon EC2 instance in the same Region as Amazon S3 and install the conversion software onto the instance. Perform the transformation and re-upload the files to Amazon S3 from the EC2 instance.

**Correct Answer: C**

Explanation  
https://aws.amazon.com/snowball/pricing/

Q 178/218

**What does Amazon ElastiCache provide?**

**A.** A managed In-memory cache service.

**B.** A virtual server with a huge amount of memory.

**C.** An Amazon EC2 instance with the Memcached software already pre-installed.

**D.** A service by this name doesn't exist. Perhaps you mean Amazon CloudCache.

**Correct Answer: A**

Q 179/218

**You need to set up a high level of security for an Amazon Relational Database Service (RDS) you have just built in order to protect the confidential information stored in it. What are all the possible security groups that RDS uses?**

**A.** DB security groups, VPC security groups, and EC2 security groups.

**B.** DB security groups only.

**C.** EC2 security groups only.

**D.** VPC security groups, and EC2 security groups.

**Correct Answer: A**

A security group controls the access to a DB instance. It does so by allowing access to IP address ranges or Amazon EC2 instances that you specify.  
Amazon RDS uses DB security groups, VPC security groups, and EC2 security groups. In simple terms, a DB security group controls access to a DB instance that is not in a VPC, a VPC security group controls access to a DB instance inside a VPC, and an Amazon EC2 security group controls access to an EC2 instance and can be used with a DB instance.  
Reference: http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Welcome.html

Q 180/218

**An application currently stores objects in Amazon S3-Standard. The application accesses new objects frequently for one week. After one week, they are accessed occasionally for analysis batch jobs. A Solutions Architect has been asked to reduce storage costs for the application while allowing immediate access for batch jobs.  
How can costs be reduced without reducing data durability?**

**A.** Create a lifecycle policy that moves Amazon S3 data to Amazon S3 One Zone-Infrequent Access storage after 7 days. After 30 days, move the data to Amazon Glacier.

**B.** Keep the data on Amazon S3, and create a lifecycle policy to move S3 data to Amazon Glacier after 7 days.

**C.** Move all Amazon S3 data to S3 Standard-Infrequent Access storage, and create a lifecycle policy to move the data to Amazon Glacier after 7 days.

**D.** Keep the data on Amazon S3, then create a lifecycle policy to move the data to S3 Standard-Infrequent Access storage after 7 days.

**Correct Answer: D**

Explanation  
https://docs.aws.amazon.com/AmazonS3/latest/dev/storage-class-intro.html

Q 181/218

**A company is adopting serverless architecture The company's solutions architect wants to modernize an application that has source data in csv format A large team of developers needs to use the application to run SQL queries and reports on demand by joining data across multiple tables Which combination of actions will meet these requirements MOST cost-effectively? (Select TWO )**

**A.** Run on-demand reports and queries by using Amazon Athena

**B.** Run on-demand reports and queries by using Amazon QuickSight

**C.** Store the source data in Amazon S3

**D.** Load the source data into Amazon RDS

**E.** Run on-demand reports and queries by using Amazon DynamoDB

**Correct Answer: A,C**

Q 182/218

**A company recently expanded globally and wants to make its application accessible to users in those geographic locations. The application is deploying on Amazon EC2 instances behind an Application Load balancer in an Auto Scaling group. The company needs the ability shift traffic from resources in one region to another.  
What should a solutions architect recommend?**

**A.** Configure an Amazon Route 53 multivalue answer routing policy

**B.** Configure an Amazon Route 53 latency routing policy

**C.** Configure an Amazon Route 53 geoproximity fouling policy.

**D.** Configure an Amazon Route 53 geolocation routing policy

**Correct Answer: D**

Q 183/218

**You have been asked to design the storage layer for an application. The application requires disk performance of at least 100,000 lOPS in addition, the storage layer must be able to survive the loss of an individual disk. EC2 instance, or Availability Zone without any data loss. The volume you provide must have a capacity of at least 3 TB. Which of the following designs will meet these objectives'?**

**A.** Instantiate a c3.8xlarge instance in us-east-1. Provision an AWS Storage Gateway and configure it for 3 TB of storage and 100,000 lOPS. Attach the volume to the instance.

**B.** Instantiate an i2.8xlarge instance in us-east-la. Create a RAID 0 volume using the four 800GB SSD ephemeral disks provided with the instance. Configure synchronous, block- level replication to an identically configured instance in us-east-lb.

**C.** Instantiate a c3.8xlarge instance in us-east-1. Provision 4x1TB EBS volumes, attach them to the instance, and configure them as a single RAID 5 volume. Ensure that EBS snapshots are performed every 15 minutes.

**D.** Instantiate an i2.8xlarge instance in us-east-la. Create a RAID 0 volume using the four 800GB SSD ephemeral disks provided with the instance. Provision 3x1TB EBS volumes, attach them to the instance, and configure them as a second RAID 0 volume. Configure synchronous, block-level replication from the ephemeral-backed volume to the EBS-backed volume.

**E.** Instantiate a c3.8xlarge instance in us-east-1. Provision 3xiTB EBS volumes, attach them to the Instance, and configure them as a single RAID 0 volume. Ensure that EBS snapshots are performed every 15 minutes.

**Correct Answer: D**

Q 184/218

**A company uses Amazon S3 for storing a variety of files. A Solutions Architect needs to design a feature that will allow users to instantly restore any deleted files within 30 days of deletion.  
Which is the MOST cost-efficient solution?**

**A.** Create lifecycle policies that move the objects to Amazon Glacier and delete them after 30 days.

**B.** Enable cross-region replication. Empty the replica bucket every 30 days using an AWS Lambda function.

**C.** Enable versioning and MFA Delete. Using a Lambda function, remove MFA delete from objects more than 30 days old.

**D.** Enable versioning and create a lifecycle policy to remove expired versions after 30 days.

**Correct Answer: D**

Q 185/218

**An organization has a statutory requirement to protect the data at rest for data stored in EBS volumes.  
Which of the below mentioned options can the organization use to achieve data protection?**

**A.** Data replication.

**B.** Data encryption.

**C.** Data snapshot.

**D.** All the options listed here.

**Correct Answer: D**

For protecting the Amazon EBS data at REST, the user can use options, such as Data Encryption (Windows / Linux / third party based), Data Replication (AWS internally replicates data for redundancy), and Data Snapshot (for point in time backup).  
Reference: http://media.amazonwebservices.com/AWS\_Security\_Best\_Practices.pdf

Q 186/218

**A user has created a VPC with CIDR 20.0.0.0/16 using the wizard. The user has created a public subnet CIDR (20.0.0.0/24) and VPN only subnets CIDR (20.0.1.0/24) along with the VPN gateway (vgw-123456) to connect to the user's data center. The user's data center has CIDR 172.28.0.0/12. The user has also setup a NAT instance (i-123456) to allow traffic to the internet from the VPN subnet.  
Which of the below mentioned options is not a valid entry for the main route table in this scenario?**

**A.** Destination: 20.0.0.0/16 and Target: local

**B.** Destination: 0.0.0.0/0 and Target: i-123456

**C.** Destination: 172.28.0.0/12 and Target: vgw-123456

**D.** Destination: 20.0.1.0/24 and Target: i-123456

**Correct Answer: D**

The user can create subnets as per the requirement within a VPC. If the user wants to connect VPC from his own data centre, he can setup a public and VPN only subnet which uses hardware VPN access to connect with his data centre. When the user has configured this setup with Wizard, it will create a virtual private gateway to route all traffic of the VPN subnet. If the user has setup a NAT instance to route all the internet requests, then all requests to the internet should be routed to it. All requests to the organization's DC will be routed to the VPN gateway. Here are the valid entries for the main route table in this scenario:  
Destination: 0.0.0.0/0 & Target: i-123456 (To route all internet traffic to the NAT Instance) Destination:  
172.28.0.0/12 & Target: vgw-123456 (To route all the organization's data centre traffic to the VPN gateway) Destination: 20.0.0.0/16 & Target: local (To allow local routing in VPC) Reference:  
http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\_Scenario3.html

Q 187/218

**A customer has an application that is used by enterprise customers outside of AWS.  
Some of these customers use legacy firewalls that cannot whitelist by DNS name, but whitelist based only on IP address. The application is currently deployed in two Availability Zones, with one EC2 instance in each that has Elastic IP addresses. The customer wants to whitelist only two IP addresses, but the two existing EC2 instances cannot sustain the amount of traffic.  
What can a Solutions Architect do to support the customer and allow for more capacity?  
(Choose two.)**

**A.** Create a Network Load Balancer with an interface in each subnet, and assign a static IP address to each subnet.

**B.** Create additional EC2 instances and put them on standby. Remap an Elastic IP address to a standby instance in the event of a failure.

**C.** Use Amazon Route 53 with a weighted, round-robin routing policy across the Elastic IP addresses to resolve one at a time.

**D.** Add additional EC2 instances with Elastic IP addresses, and register them with Amazon Route 53

**E.** Switch the two existing EC2 instances for an Auto Scaling group, and register them with the Network Load Balancer.

**Correct Answer: A,E**

Explanation  
https://aws.amazon.com/blogs/networking-and-content-delivery/using-static-ip-addresses-for-application-load-ba NLB enables static IP addresses for each Availability Zone. These static addresses don't change, so they are good for our firewalls' whitelisting.

Q  188/218

**Is it possible to get a history of all EC2 API calls made on your account for security analysis and operational troubleshooting purposes?**

**A.** Yes, by default, the history of your API calls is logged.

**B.** Yes, you should turn on the CloudTrail in the AWS console.

**C.** No, you can only get a history of VPC API calls.

**D.** No, you cannot store history of EC2 API calls on Amazon.

**Correct Answer: B** To get a history of all EC2 API calls (including VPC and EBS) made on your account, you simply turn on  
CloudTrail in the AWS Management Console.  
Reference: https://aws.amazon.com/ec2/faqs/

Q  189/218

**A large real-estate brokerage is exploring the option of adding a cost-effective location based alert to their existing mobile application. The application backend infrastructure currently runs on AWS. Users who opt in to this service will receive alerts on their mobile device regarding real-estate otters in proximity to their location.  
For the alerts to be relevant delivery time needs to be in the low minute count the existing mobile app has 5 million users across the US.  
Which one of the following architectural suggestions would you make to the customer?**

**A.** The mobile application will submit its location to a web service endpoint utilizing Elastic Load Balancing and EC2 instances; DynamoDB will be used to store and retrieve relevant offers EC2 instances will communicate with mobile earners/device providers to push alerts back to mobile application.

**B.** Use AWS DirectConnect or VPN to establish connectivity with mobile carriers EC2 instances will receive the mobile applications location through carrier connection: RDS will be used to store and relevant offers.  
EC2 instances will communicate with mobile carriers to push alerts back to the mobile application.

**C.** The mobile application will send device location using SQS. EC2 instances will retrieve the relevant others from DynamoDB. AWS Mobile Push will be used to send offers to the mobile application.

**D.** The mobile application will send device location using AWS Mobile Push EC2 instances will retrieve the relevant offers from DynamoDB. EC2 instances will communicate with mobile carriers/device providers to push alerts back to the mobile application.

**Correct Answer: C**

Q 190/218

**An AWS customer is deploying an application mat is composed of an AutoScaling group of EC2 Instances.  
The customers security policy requires that every outbound connection from these instances to any other service within the customers  
Virtual Private Cloud must be authenticated using a unique x 509 certificate that contains the specific instance-id.  
In addition an x 509 certificates must Designed by the customer's Key management service in order to be trusted for authentication.  
Which of the following configurations will support these requirements?**

**A.** Configure the launched instances to generate a new certificate upon first boot Have the Key management service poll the AutoScaling group for associated instances and send new instances a certificate signature (hat contains the specific instance-id.

**B.** Embed a certificate into the Amazon Machine Image that is used by the Auto Scaling group Have the launched instances generate a certificate signature request with the instance's assigned instance-id to the Key management service for signature.

**C.** Configure the Auto Scaling group to send an SNS notification of the launch of a new instance to the trusted key management service. Have the Key management service generate a signed certificate and send it directly to the newly launched instance.

**D.** Configure an IAM Role that grants access to an Amazon S3 object containing a signed certificate and configure me Auto Scaling group to launch instances with this role Have the instances bootstrap get the certificate from Amazon S3 upon first boot.

**Correct Answer: D**

Q 191/218

**A solutions architect is designing an application for a two-step order process The first step is synchronous and must return to the user with little latency The second step takes longer, so it will be implemented in a separate component Orders must be processed exactly once and in the order in which they are received How should the solutions architect integrate these components?**

**A.** Use an Amazon SQS FIFO queues

**B.** Create an SNS topic and subscribe an Amazon SQS Standard queue to that topic.

**C.** Create an SNS topic and subscribe an Amazon SQS FIFO queue to that topic

**D.** Use an AWS Lambda function along with Amazon SQS standard queues

**Correct Answer: C**

Q 192/218

**A company needs to quickly ensure that all files created in an Amazon S3 bucket in us-east-1 are also available in another bucket in ap-southeast-2. Which option represents the SIMPLEST way to implement this design?**

**A.** Use SNS to notify the bucket in ap-southeast-2 to create a file whenever a file is cheated in the bucket in us-east-1.

**B.** Add an S3 lifecycle rule to move any new files from the bucket in us-east-1 to the bucket in ap-southeast-2.

**C.** Create a Lambda function to be triggered for every new file in us-east-1 that copies the file to the bucket in ap-southeast-2

**D.** Enable versioning and configure cross-region replication from the bucket in us-east-1 to the bucket in ap-southeast-2.

**Correct Answer: B**

Q 193/218

**What is the maximum number of data points for an HTTP data request that a user can include in PutMetricRequest in the CloudWatch?**

**A.** 30

**B.** 50

**C.** 10

**D.** 20

**Correct Answer: D**

Explanation/Reference:  
Explanation:  
The size of a PutMetricData request of CloudWatch is limited to 8KB for the HTTP GET requests and  
40KB for the HTTP POST requests. The user can include a maximum of 20 data points in one PutMetricData request.  
http://docs.aws.amazon.com/AmazonCloudWatch/latest/DeveloperGuide/cloudwatch\_concepts.html

Q 194/218

**A Solutions Architect has been given the following requirements for a company's VPC:  
\* The solution is a two-tiered application with a web tier and a database tier.  
\* All web traffic to the environment must be directed from the Internet to an Application Load Balancer.  
\* The web servers and the databases should not obtain public IP addresses or be directly accessible from the public Internet.  
\* Because of security requirements, databases may not share a route table or subnet with any other service.  
\* The environment must be highly available within the same VPC for all services.  
What is the minimum number of subnets that the Solutions Architect will need based on these requirements and best practices?**

**A.** 2

**B.** 3

**C.** 4

**D.** 6

**Correct Answer: D** 2 public subnets for ALB, 2 private subnets for web tier and 2 private subnets for db tier across  
2AZ's.

Q 195/218

**A solutions architect is designing a new API using Amazon API Gateway that will receive requests from users.  
The volume of requests is highly variable; several hours can pass without receiving a single request. The data processing will take place asynchronously, but should be completed within a few seconds after a request is made.  
Which compute service should the solutions architect have the API invoke to deliver the requirements at the lowest cost?**

**A.** A containerized service hosted in Amazon Elastic Kubernetes Service (Amazon EKS)

**B.** An AWS Glue job

**C.** An AWS Lambda function

**D.** A containerized service hosted in Amazon ECS with Amazon EC2

**Correct Answer: C**

Q 196/218

**An organization designs a mobile application for their customers to upload photos to a site. The application needs a secure login with MFA. The organization wants to limit the initial build time and maintenance of the solution.  
Which solution should a Solutions Architect recommend to meet the requirements?**

**A.** Use Amazon API Gateway and require SSE for photos

**B.** Edit AWS 1AM policies to require MFA for all users.

**C.** Use Amazon Cognito Identity with SMS-based MFA.

**D.** Federate 1AM against corporate AD that requires MFA.

**Correct Answer: C**

Q  197/218

**A user wants to list the IAM role that Is attached to their Amazon EC2 Instance. The user has login access to the EC2 instance but does not have IAM permissions What should a solutions architect do to retrieve this information?**

**A)  
  
B)  
  
C)  
  
D)  
**

**A.** Option D

**B.** Option B

**C.** Option A

**D.** Option C

**Correct Answer: C**

Q 198/218

**An Amazon EC2 administrator created the following policy associated with an IAM group containing several users:**

A computer screen shot of a computer program

AI-generated content may be incorrect.

**What is the effect of this policy?**

**A.** Users cannot terminate an EC2 instance in the us-east-1 Region when the user's source IP is  
10.100.100.254.

**B.** Users can terminate an EC2 instance in any AWS Region except us-east-1.

**C.** Users can terminate an EC2 instance with the IP address 10.100.100.1 in the us-east-1 Region.

**D.** Users can terminate an EC2 instance in the us-east-1 Region when the user's source IP is 10.100.100.254.

**Correct Answer: D**

Q 199/218

**A company's dynamic website is hosted using on-premises servers in the United States. The company is launching its product in Europe and it wants to optimize site loading times for new European users. The site's backend must remain in the United States. The product is being launched in a few days, and an immediate solution is needed What should the solutions architect recommend?**

**A.** Launch an Amazon EC2 instance in us-east-1 and migrate the site to it

**B.** Move the website to Amazon S3 Use cross-Region replication between Regions.

**C.** Use Amazon CloudFront with a custom origin pointing to the on-premises servers

**D.** Use an Amazon Route 53 geoproximity routing policy pointing to on-premises servers

**Correct Answer: C**

Q 200/218

**What is an isolated database environment running in the cloud (Amazon RDS) called?**

**A.** DB Unit

**B.** DB Instance

**C.** DB Server

**D.** DB Volume

**Correct Answer: B**

Q 201/218 **A financial services company is moving to AWS and wants to enable developers to experiment and innovate while preventing access to production applications. The company has the following requirements:  
\* Production workloads cannot be directly connected to the internet.  
\* All workloads must be restricted to the us-west-2 and eu-central-1 Regions.  
\* Notification should be sent when developer sandboxes exceed $500 in AWS spending monthly.  
Which combination of actions needs to be taken to create a multi-account structure that meets the company's requirements? (Choose Three.)**

**A.** Create a SCP containing a Deny Effect for cloudfront:\*, iam:\*, route53:\*, and support:\* with a StringNotEquals condition on an aws:RequestedRegion condition key with us-west-2 and eu-central-1 values. Attach the SCP to the organization's root.

**B.** Create accounts for each development workload within an organization in AWS Organizations. Place the development accounts within an organizational unit (OU). Create a custom AWS Config rule to deactivate all IAM users when an account's monthly bill exceeds $500.

**C.** Create accounts for each production workload within an organization in AWS Organizations. Place the production accounts within an organizational unit (OU). For each account, delete the default VPC.  
Create an SCP with a Deny rule for the attach an internet gateway and create a default VPC actions.  
Attach the SCP to the OU for the production accounts.

**D.** Create an IAM permission boundary containing a Deny Effect for cloudfront:\*, iam:\*, route53:\*, and support:\* with a StringNotEquals condition on an aws:RequestedRegion condition key with us-west-2 and eu-central-1 values. Attach the permission boundary to an IAM group containing the development and production users.

**E.** Create accounts for each production workload within an organization in AWS Organizations. Place the production accounts within an organizational unit (OU). Create an SCP with a Deny rule on the attach an internet gateway action. Create an SCP with a Deny rule to prevent use of the default VPC. Attach the SCPs to the OU for the production accounts.

**F.** Create accounts for each development workload within an organization in AWS Organizations. Place the development accounts within an organizational unit (OU). Create a budget within AWS Budgets for each development account to monitor and report on monthly spending exceeding $500.

**Correct Answer: A,C,F**

Q 202/218

**You are running a news website in the eu-west-1 region that updates every 15 minutes. The website has a world-wide audience it uses an Auto Scaling group behind an Elastic Load Balancer and an**[**Amazon RDS**](https://www.freecram.net/question/Amazon.AWS-Solutions-Associate.v2022-03-26.q218/you-are-running-a-news-website-in-the-eu-west-1-region-that-updates-every-15-minutes-the-website-has)**database Static content resides on**[**Amazon S3**](https://www.freecram.net/question/Amazon.AWS-Solutions-Associate.v2022-03-26.q218/you-are-running-a-news-website-in-the-eu-west-1-region-that-updates-every-15-minutes-the-website-has)**, and is distributed through Amazon CloudFront. Your Auto Scaling group is set to trigger a scale up event at 60% CPU utilization, you use an Amazon RDS extra large**[**DB**](https://www.freecram.net/question/Amazon.AWS-Solutions-Associate.v2022-03-26.q218/you-are-running-a-news-website-in-the-eu-west-1-region-that-updates-every-15-minutes-the-website-has)**instance with 10.000 Provisioned IOPS. Its CPU utilization is around 80%. While freeable memory is in the 2 GB range.  
Web analytics reports show that the average load time of your web pages is around 1.5 to 2 seconds, but your SEO consultant wants to bring down the average load time to under  
0.5 seconds.  
How would you improve page load times for your users? (Choose 3 answers)**

**A.** Add an Amazon ElastiCache caching layer to your application for storing sessions and frequent DB queries

**B.** Lower the scale up trigger of your Auto Scaling group to 30% so it scales more aggressively.

**C.** Switch Amazon RDS database to the high memory extra large Instance type

**D.** Set up a second installation in another region, and use the Amazon Route 53 latency-based routing feature to select the right region.

**E.** Configure Amazon CloudFront dynamic content support to enable caching of re-usable content from your site

**Correct Answer: A,B,C**

Q 203/218

**A Solutions Architect is designing a three-tier web application that includes an Auto Scaling group of Amazon EC2 instances running behind an ELB Classic Load Balancer. The security team requires that all web servers must be accessible only through the Load Balancer, and that none of the web servers are directly accessible from the Internet.  
How should the Architect meet these requirements?**

**A.** Use a Load Balancer installed on an Amazon EC2 instance.

**B.** Configure the web servers' security group to deny traffic from the public Internet.

**C.** Create an Amazon CloudFront distribution in front of the ELB Classic Load Balancer.

**D.** Configure the web tier security group to allow only traffic from the ELB Classic Load Balancer.

**Correct Answer: D** Explanation  
https://docs.aws.amazon.com/vpc/latest/userguide/VPC\_SecurityGroups.html

Q 204/218

**A company recently implemented hybrid cloud connectivity using AWS Direct Connect and is migrating data to Amazon S3. The company is looking for a fully managed solution that will automate and accelerate the replication of data between the on-premises storage systems and AWS storage services.  
Which solution should a solutions architect recommend to keep the data private?**

**A.** Deploy an AWS Storage Gateway volume gateway for the on-premises environment. Configure it to store data locally, and asynchronously back up point-in-time snapshots to AWS.

**B.** Deploy an AWS DataSync agent for the on-premises environment. Schedule a batch job to replicate point- in-time snapshots to AWS.

**C.** Deploy an AWS Storage Gateway file gateway for the on-premises environment. Configure it to store data locally, and asynchronously back up point-in-time snapshots to AWS.

**D.** Deploy an AWS DataSync agent for the on-premises environment. Configure a sync job to replicate the data and connect it with an AWS service endpoint.

**Correct Answer: D**

Q  205/218

**Which of the following components of AWS Data Pipeline polls for tasks and then performs those tasks?**

**A.** Pipeline Definition

**B.** Task Runner

**C.** Amazon Elastic MapReduce (EMR)

**D.** AWS Direct Connect

**Correct Answer: B**

Explanation/Reference:  
Explanation:  
Task Runner polls for tasks and then performs those tasks.  
http://docs.aws.amazon.com/datapipeline/latest/DeveloperGuide/what-is-datapipeline.html

Q 206/218

**A company's application runs on Amazon EC2 instances behind an Application Load Balancer (ALB) The instances run in an Amazon EC2 Auto Scaling group across multiple Availability Zones On the first day of every month at midnight the application becomes much slower when the month-end financial calculation batch executes This causes the CPU utilization of the EC2 instances to immediately peak to 100%. which disrupts the application What should a solutions architect recommend to ensure the application is able to handle the workload and avoid downtime?**

**A.** Configure an Amazon CloudFront distribution in front of the ALB

**B.** Configure an EC2 Auto Scaling simple scaling policy based on CPU utilization

**C.** Configure an EC2 Auto Scaling scheduled scaling policy based on the monthly schedule.

**D.** Configure Amazon ElastiCache to remove some of the workload from the EC2 instances

**Correct Answer: C**

Explanation  
Scheduled Scaling for Amazon EC2 Auto Scaling  
Scheduled scaling allows you to set your own scaling schedule. For example, let's say that every week the traffic to your web application starts to increase on Wednesday, remains high on Thursday, and starts to decrease on Friday. You can plan your scaling actions based on the predictable traffic patterns of your web application. Scaling actions are performed automatically as a function of time and date.  
https://docs.aws.amazon.com/autoscaling/ec2/userguide/schedule\_time.html

Q  207/218

**A Solutions Architect is designing an application on AWS that will connect to the on-premise data center through a VPN connection. The solution must be able to log network traffic over the VPN. Which service logs this network traffic?**

**A.** AWS CloudTrail

**B.** logs Amazon VPC flow logs

**C.** Amazon S3 bucket logs

**D.** Amazon CloudWatch Logs

**Correct Answer: B**

Explanation  
VPC Flow LogsIn order to provide better support for this important aspect of network monitoring, we are introducing Flow Logs for the Amazon Virtual Private Cloud. Once enabled for a particular VPC, VPC subnet, or Elastic Network Interface (ENI), relevant network traffic will be logged to CloudWatch Logs for storage and analysis by your own applications or third-party tools.  
You can create alarms that will fire if certain types of traffic are detected; you can also create metrics to help you to identify trends and patterns.  
The information captured includes information about allowed and denied traffic (based on security group and network ACL rules). It also includes source and destination IP addresses, ports, the IANA protocol number, packet and byte counts, a time interval during which the flow was observed, and an action (ACCEPT or REJECT).

Q 208/218

**A solutions architect is designing the cloud architecture for a new application being deployed to AWS. The application allows users to interactively download and upload files. Files older than 2 years will be accessed less frequently. The solutions architect needs to ensure that the application can scale to any number of files while maintaining high availability and durability.  
Which scalable solutions should the solutions architect recommend? (Choose two.)**

**A.** Store the files on Amazon Elastic File System (Amazon EFS) with a lifecycle policy that moves objects older than 2 years to EFS Infrequent Access (EFS IA).

**B.** Store the files on Amazon S3 with a lifecycle policy that moves objects older than 2 years to S3 Standard- Infrequent Access (S3 Standard-IA)

**C.** Store the files in RAID-striped Amazon Elastic Block Store (Amazon EBS) volumes. Schedule snapshots of the volumes. Use the snapshots to archive data older than 2 years.

**D.** Store the files on Amazon S3 with a lifecycle policy that moves objects older than 2 years to S3 Glacier.

**E.** Store the files in Amazon Elastic Block Store (Amazon EBS) volumes. Schedule snapshots of the volumes.  
Use the snapshots to archive data older than 2 years.

**Correct Answer: A,D**

Q 209/218

**What is the average queue length recommended by AWS to achieve a lower latency for the 200 PIOPS EBS volume?**

**A.** 5

**B.** 1

**C.** 2

**D.** 4

**Correct Answer: B** The queue length is the number of pending I/O requests for a device. The optimal average queue length will vary for every customer workload, and this value depends on a particular application's sensitivity to IOPS and latency. If the workload is not delivering enough I/O requests to maintain the optimal average queue length, then the EBS volume might not consistently deliver the IOPS that have been provisioned.  
However, if the workload maintains an average queue length that is higher than the optimal value, then the per-request I/O latency will increase; in this case, the user should provision more IOPS for his volume.  
AWS recommends that the user should target an optimal average queue length of 1 for every 200 provisioned IOPS and tune that value based on his application requirements.  
Reference:  
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-workload-demand.html

Q 210/218

**A workload in an Amazon VPC consists of a single web server launched from a custom AMI. Session state is stored in a database.  
How should the Solutions Architect modify this workload to be both highly available and scalable?**

**A.** Create a launch configuration with the AMI ID of the web server image. Create an Auto Scaling group using the newly-created launch configuration, and a desired capacity of two web servers across multiple regions. Use an Application Load Balancer (ALB) to balance traffic across the Auto Scaling group.

**B.** Create a launch configuration with the AMI ID of the web server image. Create an Auto Scaling group using the newly-created launch configuration, and a desired capacity of two web servers across multiple Availability Zones. Use Amazon Route 53 weighted routing to balance traffic across the Auto Scaling group.

**C.** Create a launch configuration with the AMI ID of the web server image. Create an Auto Scaling group using the newly-created launch configuration, and a desired capacity of two web servers across multiple Availability Zones. Use an ALB to balance traffic across the Auto Scaling group.

**D.** Create a launch configuration with a desired capacity of two web servers across multiple Availability Zones. Create an Auto Scaling group with the AMI ID of the web server image. Use Amazon Route 53 latency-based routing to balance traffic across the Auto Scaling group.

**Correct Answer: C**

Q 211/218

**A customer is migrating to AWS and requires applications to access Network File System shares without code changes. Data is critical and accessed frequently.  
Which storage solution should a Solutions Architect recommend to maximize availability and durability?**

**A.** Amazon EBS

**B.** Amazon EFS

**C.** AWS Storage Gateway for files

**D.** Amazon S3

**Correct Answer: B**

Q 212/218

**A Solutions Architect needs to design a solution that will enable a security team to detect, review, and perform root cause analysis of security incidents that occur in a cloud environment. The Architect must provide a centralized view of all API events for current and future AWS regions.  
How should the Architect accomplish this task?**

**A.** Enable AWS CloudTrail by creating a new trail and apply the trail to all regions.

**B.** Enable AWS CloudTrail logging in each individual region. Repeat this for all future regions.

**C.** Enable AWS Trusted Advisor security checks and report all security incidents for all regions.

**D.** Enable Amazon CloudWatch logs for all AWS services across all regions and aggregate them in a single Amazon S3 bucket.

**Correct Answer: A**

Q 213/218

**An application uses an Amazon SQS queue as a transport mechanism to deliver data to a group of EC2 instances for processing. The application owner wants to add a mechanism to archive the incoming data without modifying application code on the EC2 instances.  
How can this application be re-architected to archive the data without modifying the processing instances?**

**A.** Trigger a Lambda function by using Amazon CloudWatch Events to retrieve messages from the SQS queue and archive to Amazon S3.

**B.** Use an Amazon SNS topic to fan out the data to the SQS queue in addition to a Lambda function that records the data to an S3 bucket.

**C.** Set up an Amazon Kinesis Data Stream so that multiple instances can receive data. Add a separate EC2 instance that is configured to archive all data it receives.

**D.** Write the data to an S3 bucket, and use an SQS queue for S3 event notifications to tell the instances where to retrieve the data.

**Correct Answer: B**

https://docs.aws.amazon.com/cognito/latest/developerguide/synchronizing-data.html

Q 214/218

**A company is using Amazon CloudFront with its website. The company has enabled logging on the CloudFront distribution, and logs are saved in one of the company's Amazon S3 buckets. The company needs to perform advanced analysis on the logs and build visualizations.  
What should a solutions architect do to meet these requirements?**

**A.** Use standard SQL queries in Amazon Athena to analyze CloudFront logs in the S3 bucket. Visualize the results with AWS Glue.

**B.** Use standard SQL queries in Amazon Athena to analyze the CloudFront logs in the S3 bucket. Visual the results with Amazon QuickSight.

**C.** Use standard queries in Amazon DynamoDB to analyze the Cloudfront logs in the S3 bucket. Visualize the results with the AWS Glue.

**D.** Use standard SQL queries in Amazon DynamoDB to analyze the CloudFront logs in the S3 bucket. Visualize the results with Amazon QuickSight.

**Correct Answer: D**

Q 215/218

**A company has an application that calls AWS Lambda functions A recent code review found database credentials stored in the source code The database credentials need to be removed from the Lambda source code The credentials must then be securely stored and rotated on an ongoing basis to meet security policy requirements What should a solutions architect recommend to meet these requirements?**

**A.** Move the database password to an environment variable associated with the Lambda function Retrieve the password from the environment variable upon execution

**B.** Store the password in AWS Secrets Manager Associate the Lambda function with a role that can retrieve the password from Secrets Manager given its secret ID

**C.** Store the password in AWS CloudHSM Associate the Lambda function with a role that can retrieve the password from CloudHSM given its key ID

**D.** Store the password in AWS Key Management Service (AWS KMS) Associate the Lambda function with a role that can retrieve the password from AWS KMS given its key ID

**Correct Answer: B**

Q  216/218

**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 company. Use consolidated billing to ensure that AnyCompany needs to pay a single bill only.

**B.** Create a multi-account strategy with a virtual private cloud (VPC) for each company. Reduce impact across companies by not creating any VPC peering links. As everything is in a single account, there will be a single invoice. Use tagging to create a detailed bill for each company.

**C.** Create IAM users for each Developer in the account to which they require access. Create policies that allow the users access to all resources in that account. Attach the policies to the IAM user.

**D.** Create a federated identity store against the company's Active Directory. Create IAM roles with appropriate permissions and set the trust relationships with AWS and the identity store. Use AWS STS to grant users access based on the groups they belong to in the identity store.

**E.** Create a multi-account strategy with an account per company. For billing purposes, use a tagging solution that uses a tag to identify the company that creates each resource.

**Correct Answer: B,D**

Q  217/218

**Which of the following are use cases for Amazon DynamoDB? Choose 3 answers**

**A.** Storing metadata for Amazon 53 objects.

**B.** Running relational joins and complex updates.

**C.** Storing BLOB data.

**D.** Managing web sessions.

**E.** Storing large amounts of infrequently accessed data.

**F.** Storing JSON documents.

**Correct Answer: B,E,F**

Q 218/218

**A company currently stores symmetric encryption keys in a**[**hardware**](https://www.freecram.net/question/Amazon.AWS-Solutions-Associate.v2022-03-26.q218/a-company-currently-stores-symmetric-encryption-keys-in-a-hardware-security-module-hsm-a-solution)**security module (HSM). A solution architect must design a solution to migrate key management to AWS. The solution should allow for key rotation and support the use of customer provided keys.  
Where should the key material be stored to meet these requirements?**

**A.** Amazon S3

**B.** AWS Systems Manager Parameter store

**C.** AWS Secrets Manager

**D.** AWS Key Management Service (AWS KMS)

**Correct Answer: C**