1

A mobile gaming company wants to capture data from its gaming app and make the data available for analysis immediately. The data record size will be approximately 20 KB. The company is concerned about achieving optimal throughput from each device. Additionally, the company wants to develop a data stream processing application with dedicated throughput for each consumer. Which solution would achieve this goal?

Have the app call the PutRecords API to send data to Amazon Kinesis Data Streams. Host the stream-processing application on Amazon EC2 with Auto Scaling.

It is good to have the app call the PutRecords API to send data to Amazon Kinesis Data Streams. Also, host the application on Amazon EC2 with Auto Scaling.

2

A marketing company wants to improve its reporting and business intelligence capabilities. During the planning phase, the company interviewed the relevant stakeholders and discovered that: - The operations team reports are run hourly for the current month’s data. - The sales team wants to use multiple Amazon QuickSight dashboards to show a rolling view of the last 30 days, based on several categories. The sales team also wants to view the data as soon as it reaches the reporting backend. - The finance team’s reports are run daily for last month’s data and once a month for the last 24 months of data. Currently, there is 400 TB of data in the system with an expected additional 100 TB added every month. The company is looking for a solution that is as cost-effective as possible. Which solution meets the company’s requirements?

Store the last 2 months’ data in Amazon Redshift and the rest of the months in Amazon S3. Set up an external schema and table for Amazon Redshift Spectrum. Configure Amazon QuickSight with Amazon Redshift as the data source.

Store the last 2 months’ data in Amazon Redshift and the rest of the months in Amazon S3. Set up an external schema and table for Amazon Redshift Spectrum. Configure Amazon QuickSight with Amazon Redshift as the data source.

3

A media company wants to perform machine learning and analytics on the data residing in its Amazon S3 data lake. There are two data transformation requirements that will enable the consumers within the company to create reports: - Daily transformations of 300 GB of data with different file formats landing in Amazon S3 at a scheduled time. - One-time transformations of terabytes of archived data residing in the S3 data lake. Which combination of solutions cost-effectively meets the company’s requirements for transforming the data? (Choose four.)

For daily incoming data, use AWS Glue crawlers to scan and identify the schema

For daily incoming data, use Amazon Athena to scan and identify the schema

For daily incoming data, use Amazon Redshift to perform transformations

For daily incoming data, use AWS Glue workflows with AWS Glue jobs to perform transformations

For all the incoming data, we can use AWS Glue, Athena, RedShift to perform different operations.

4

A hospital uses wearable medical sensor devices to collect data from patients. The hospital is architecting a near real-time solution that can ingest the data securely at scale. The solution should also be able to remove the patient’s protected health information (PHI) from the streaming data and store the data in durable storage. Which solution meets these requirements with the least operational overhead?

Ingest the data using Amazon Kinesis Data Streams, which invokes an AWS Lambda function using Kinesis Client Library (KCL) to remove all PHI

Ingest the data using Amazon Kinesis Data Firehose to write the data to Amazon S3. Have Amazon S3 trigger an AWS Lambda function that parses the sensor data to remove all PHI in Amazon S3

Ingest the data using Amazon Kinesis Data Firehose to write the data to Amazon S3. Implement a transformation AWS Lambda function that parses the sensor data to remove all PHI

For the least operational overhead, ingest the data using Amazon Kinesis Data streams as mentioned in option a, c, and e.

5

A company is migrating its existing on-premises ETL jobs to Amazon EMR. The code consists of a series of jobs written in Java. The company needs to reduce overhead for the system administrators without changing the underlying code. Due to the sensitivity of the data, compliance requires that the company use root device volume encryption on all nodes in the cluster. Corporate standards require that environments be provisioned though AWS CloudFormation when possible. Which solution satisfies these requirements?

Install open-source Hadoop on Amazon EC2 instances with encrypted root device volumes. Configure the cluster in the CloudFormation template.

Use a CloudFormation template to launch an EMR cluster. In the configuration section of the cluster, define a bootstrap action to encrypt the root device volume of every node.

Correct Option:A, D

**EXPLANATION**

Install Hadoop on EC2 and use cloudformation template to satisfy these requirements.

6

A transportation company uses IoT sensors attached to trucks to collect vehicle data for its global delivery fleet. The company currently sends the sensor data in small .csv files to Amazon S3. The files are then loaded into a 10-node Amazon Redshift cluster with two slices per node and queried using both Amazon Athena and Amazon Redshift. The company wants to optimize the files to reduce the cost of querying and also improve the speed of data loading into the Amazon Redshift cluster. Which solution meets these requirements?

Use AWS Glue to convert the files from .csv to Apache Parquet to create 20 Parquet files. Copy the files into Amazon Redshift and query the files with Athena from Amazon S3.

Correct Option:D

**EXPLANATION**

Use AWS Glue to convert the files from .csv to Apache Parquet to create 20 Parquet files. Copy the files into Amazon Redshift and query the files with Athena from Amazon S3.

7

An online retail company with millions of users around the globe wants to improve its ecommerce analytics capabilities. Currently, clickstream data is uploaded directly to Amazon S3 as compressed files. Several times each day, an application running on Amazon EC2 processes the data and makes search options and reports available for visualization by editors and marketers. The company wants to make website clicks and aggregated data available to editors and marketers in minutes to enable them to connect with users more effectively. Which options will help meet these requirements in the most efficient way?

Use Amazon Kinesis Data Firehose to upload compressed and batched clickstream records to Amazon Elasticsearch Service.

Use Amazon Elasticsearch Service deployed on Amazon EC2 to aggregate, filter, and process the data. Refresh content performance dashboards in near-real time.

Upload clickstream records from Amazon S3 to Amazon Kinesis Data Streams and use a Kinesis Data Streams consumer to send records to Amazon Elasticsearch Service.

Correct Option:A, C, E

**EXPLANATION**

Use Amazon Kinesis Data Firehose to upload compressed records, and use ElasticSearch service to filter and process data. Also, upload clickstream records from Amazon S3 to Kinesis Data Streams.

8

A company is streaming its high-volume billing data (100 MBps) to Amazon Kinesis Data Streams. A data analyst partitioned the data on account\_id to ensure that all records belonging to an account go to the same Kinesis shard and order is maintained. While building a custom consumer using the Kinesis Java SDK, the data analyst notices that sometimes the messages arrive out of order for account\_id. Upon further investigation, the data analyst discovers the messages that are out of order seem to be arriving from different shards for the same account\_id and are seen when a stream resize runs. What is an explanation for this behavior and what is the solution?

There are multiple shards in a stream and order needs to be maintained in the shard. The data analyst needs to make sure there is only a single shard in the stream and no stream resize runs.

**EXPLANATION**

There are multiple shards in a stream and order needs to be maintained in the shard. The data analyst needs to make sure there is only a single shard in the stream and no stream resize runs.

9

A media analytics company consumes a stream of social media posts. The posts are sent to an Amazon Kinesis data stream partitioned on user\_id. An AWS Lambda function retrieves the records and validates the content before loading the posts into an Amazon Elasticsearch cluster. The validation process needs to receive the posts for a given user in the order they were received. A data analyst has noticed that, during peak hours, the social media platform posts take more than an hour to appear in the Elasticsearch cluster. What should the data analyst do to reduce this latency?

Increase the number of shards in the stream

Data analyst should increase the number of shards in the stream

10

A company launched a service that produces millions of messages every day and uses Amazon Kinesis Data Streams as the streaming service. The company uses the Kinesis SDK to write data to Kinesis Data Streams. A few months after launch, a data analyst found that write performance is significantly reduced. The data analyst investigated the metrics and determined that Kinesis is throttling the write requests. The data analyst wants to address this issue without significant changes to the architecture. Which of the following two actions should the data analyst take to resolve this issue?

Increase the Kinesis Data Streams retention period to reduce throttling

Increase the number of shards in the stream using the UpdateShardCount AP

Correct Option:A, C

**EXPLANATION**

Increase Kinesis Data Streams retention period to reduce throttling and number of shards to maintain the write performance of the data streams.

11

A smart home automation company must efficiently ingest and process messages from various connected devices and sensors. The majority of these messages are composed of a large number of small files. These messages are ingested using Amazon Kinesis Data Streams and sent to Amazon S3 using a Kinesis data stream consumer application. The Amazon S3 message data is then passed through a processing pipeline built on Amazon EMR running scheduled PySpark jobs. The data platform team manages data processing and is concerned about the efficiency and cost of downstream data processing. They want to continue to use PySpark. Which solution improves the efficiency of the data processing jobs and is well architected?

Send the sensor and devices data directly to a Kinesis Data Firehose delivery stream to send the data to Amazon S3 with Apache Parquet record format conversion enabled. Use Amazon EMR running PySpark to process the data in Amazon S3.

12

A large financial company is running its ETL process. Part of this process is to move data from Amazon S3 into an Amazon Redshift cluster. The company wants to use the most cost-efficient method to load the dataset into Amazon Redshift. Which of the following two combinations of steps would meet these requirements?

Use the Copy command with the manifest file to load data into Amazon Redshift

Use Amazon Redshift Spectrum to query files from Amazon S3

Correct Option:A, E

**EXPLANATION**

Use Copy command to load the data into redshift. After this, you can use Redshift to query files from S3 as the cost-efficient method.

13

Which of these is an AWS's highly available and scalable DNS service, to easily manage your internal domain names with the same simplicity, security, and cost-effectiveness?

Route53 is an AWS's highly available and scalable DNS service, to easily manage your internal domain names with the same simplicity, security, and cost-effectiveness.

14

What can be the option to reduce the load on Amazon EC2 instance when the content management system running on Amazon EC2 instance which is reaching total CPU utilization?

Register the Amazon EC2 instance by creating a load balancer.

Correct Option:B

**EXPLANATION**

Register the Amazon EC2 instance by creating a load balancer to reduce the load on Amazon EC2 instance when the content management system running on Amazon EC2 instance which is reaching total CPU utilization

15

If a single instance has failed to launch within 24 hours due to some issues during a set up of Auto-scaling. Then what will happen to the Auto-Scaling condition?

Auto Scaling will remove the scaling process

16

Which of these web service helps you reliably process and move data between different AWS compute and storage services, as well as on-premises data sources, at specified intervals?

AWS Data Pipeline helps you reliably process and move data between different AWS compute and storage services, as well as on-premises data sources, at specified intervals.

17

A university intends to use Amazon Kinesis Data Firehose to collect JSON-formatted batches of water quality readings in Amazon S3. The readings are from 50 sensors scattered across a local lake. Students will query the stored data using Amazon Athena to observe changes in a captured metric over time, such as water temperature or acidity. Interest has grown in the study, prompting the university to reconsider how data will be stored. Which of the two data format and partitioning choices will most significantly reduce costs?

Store the data in Apache Avro format using Snappy compression

Store the data in Apache Parquet format using Snappy compression

Correct Option:A, D

**EXPLANATION**

Store the data into Apache Avro and Parquet format using Snappy compression as the most significant formats.

18

A financial services company needs to aggregate daily stock trade data from the exchanges into a data store. The company requires that data be streamed directly into the data store but also occasionally allows data to be modified using SQL. The solution should integrate complex, analytic queries running with minimal latency. The solution must provide a business intelligence dashboard that enables viewing of the top contributors to anomalies in stock prices. Which solution meets the company’s requirements?

Use Amazon Kinesis Data Streams to stream data to Amazon S3. Use Amazon Athena as a data source for Amazon QuickSight to create a business intelligence dashboard.

Correct Option:D

**EXPLANATION**

To achieve the goal, use Amazon Kinesis Data Streams to stream data to Amazon S3 and use Athena as a data source for Amazon QuickSight to create a business intelligence dashboard.

19

A financial company hosts a data lake in Amazon S3 and a data warehouse on an Amazon Redshift cluster. The company uses Amazon QuickSight to build dashboards and wants to secure access from its on-premises Active Directory to Amazon QuickSight. How should the data be secured?

Use a VPC endpoint to connect to Amazon S3 from Amazon QuickSight and an IAM role to authenticate Amazon Redshift

Correct Option:B

**EXPLANATION**

Data should be secured by using a VPC endpoint to connect to Amazon S3 from Amazon QuickSight and an IAM role to authenticate Amazon Redshift.

20

A real estate company has a mission-critical application using Apache HBase in Amazon EMR. Amazon EMR is configured with a single master node. The company has over 5 TB of data stored on an Hadoop Distributed File System (HDFS). The company wants a cost-effective solution to make its HBase data highly available. Which architectural pattern meets company’s requirements?

Use Spot Instances for core and task nodes and a Reserved Instance for the EMR master node. Configure the EMR cluster with multiple master nodes. Schedule automated snapshots using Amazon EventBridge

Enable EMRFS consistent view. Create an EMR HBase cluster with multiple master nodes. Point the HBase root directory to an Amazon S3 bucket.

Store the data on an EMR File System (EMRFS) instead of HDFS and enable EMRFS consistent view. Create a primary EMR HBase cluster with multiple master nodes. Create a secondary EMR HBase read-replica cluster in a separate Availability Zone. Point both clusters to the same HBase root directory in the same Amazon S3 bucket.

Correct Option:A, C, E

21

A software company hosts an application on AWS and new features are released weekly. As part of the application testing process, a solution must be developed to analyze logs from each Amazon EC2 instance to ensure that the application is working as expected after each deployment. The collection and analysis solution should be highly available with the ability to display new information with minimal delays. Which of the two/three method should the company use to collect and analyze the logs?

Enable detailed monitoring on Amazon EC2, use Amazon CloudWatch agent to store logs in Amazon S3, and use Amazon Athena for fast, interactive log analytics

Use the Amazon Kinesis Producer Library (KPL) agent on Amazon EC2 to collect and send data to Kinesis Data Firehose to further push the data to Amazon Elasticsearch Service and Kibana

Use Amazon CloudWatch subscriptions to get access to a real-time feed of logs and have the logs delivered to Amazon Kinesis Data Streams to further push the data to Amazon Elasticsearch Service and Kibana

To analyze the large logs, companies can either enable monitoring on EC2 and use Cloudwatch or use KPL agent on EC2 to collect and send data to Kinesis Data Firehose.

22

A data analyst is using AWS Glue to organize, cleanse, validate, and format a 200 GB dataset. The data analyst triggered the job to run with the Standard worker type. After 3 hours, the AWS Glue job status is still RUNNING. Logs from the job run show no error codes. The data analyst wants to improve the job execution time without overprovisioning. Which actions should the data analyst take?

Enable job bookmarks in AWS Glue to estimate the number of data processing units (DPUs). Based on the profiled metrics, increase the value of the executor-cores job parameter.

Enable job metrics in AWS Glue to estimate the number of data processing units (DPUs). Based on the profiled metrics, increase the value of the maximum capacity job parameter.

23

A company has a business unit uploading .csv files to an Amazon S3 bucket. The company’s data platform team has set up an AWS Glue crawler to discover, and create tables and schemas. An AWS Glue job writes processed data from the created tables to an Amazon Redshift database. The AWS Glue job handles column mapping and creating the Amazon Redshift table appropriately. When the AWS Glue job is rerun for any reason in a day, duplicate records are introduced into the Amazon Redshift table. Which two solutions will update the Redshift table without duplicates when jobs are rerun?

Modify the AWS Glue job to copy the rows into a staging table. Add SQL commands to replace the existing rows in the main table as postactions in the DynamicFrameWriter class.

Load the previously inserted data into a MySQL database in the AWS Glue job. Perform an upsert operation in MySQL, and copy the results to the Amazon Redshift table.

24

A streaming application is reading data from Amazon Kinesis Data Streams and immediately writing the data to an Amazon S3 bucket every 10 seconds. The application is reading data from hundreds of shards. The batch interval cannot be changed due to a separate requirement. The data is being accessed by Amazon Athena. Users are seeing degradation in query performance as time progresses. Which action can help improve query performance?

Add more memory and CPU capacity to the streaming application

In order to improve the query performance, add more memory and CPU capacity to the streaming application.

25

A company uses Amazon Elasticsearch Service (Amazon ES) to store and analyze its website clickstream data. The company ingests 1 TB of data daily using Amazon Kinesis Data Firehose and stores one day’s worth of data in an Amazon ES cluster. The company has very slow query performance on the Amazon ES index and occasionally sees errors from Kinesis Data Firehose when attempting to write to the index. The Amazon ES cluster has 10 nodes running a single index and 3 dedicated master nodes. Each data node has 1.5 TB of Amazon EBS storage attached and the cluster is configured with 1,000 shards. Occasionally, JVMMemoryPressure errors are found in the cluster logs. Which solution will improve the performance of Amazon ES?

Decrease the number of Amazon ES shards for the index

In order to improve the Amazon ES performance, decrease the number of Amazon ES shards for the index.

26

A manufacturing company has been collecting IoT sensor data from devices on its factory floor for a year and is storing the data in Amazon Redshift for daily analysis. A data analyst has determined that at an expected ingestion rate of about 2 TB per day, the cluster will be undersized in less than 4 months. A long-term solution is needed. The data analyst has indicated that most queries only reference the most recent 13 months’ data. Yet there are also quarterly reports that need to query all the data generated from the past 7 years. The chief technology officer (CTO) is concerned about the costs, administrative effort, and performance of a long-term solution. Which solution should the data analyst use to meet these requirements?

Take a snapshot of the Amazon Redshift cluster. Restore the cluster to a new cluster using dense storage nodes with additional storage capacity.

Take a snapshot of the Amazon Redshift cluster. Restore the cluster to a new cluster using dense storage nodes with additional storage capacity.

27

An insurance company has raw data in JSON format that is sent without a predefined schedule through an Amazon Kinesis Data Firehose delivery stream to an Amazon S3 bucket. An AWS Glue crawler is scheduled to run every 8 hours to update the schema in the data catalog of the tables stored in the S3 bucket. Data analysts analyze the data using Apache Spark SQL on Amazon EMR, set up with AWS Glue Data Catalog as the metastore. Data analysts say that, occasionally, the data they receive is stale. A data engineer needs to provide access to the most up-to-date data. Which solution meets these requirements?

Create an external schema based on the AWS Glue Data Catalog on the existing Amazon Redshift cluster to query new data in Amazon S3 with Amazon Redshift Spectrum

Create an external schema based on the AWS Glue Data Catalog on the existing Amazon Redshift cluster to query new data in Amazon S3 with Amazon Redshift Spectrum to allow access to the most up-to-date data.

28

A company that produces network devices has millions of users. Data is collected from the devices on an hourly basis and stored in an Amazon S3 data lake. The company runs analyses on the last 24 hours of data flow logs for abnormality detection and to troubleshoot and resolve user issues. The company also analyzes historical logs dating back 2 years to discover patterns and look for improvement opportunities. The data flow logs contain many metrics, such as date, timestamp, source IP, and target IP. There are about 10 billion events every day. How should this data be stored for optimal performance?

In compressed nested JSON, partitioned by source IP and sorted by date

For optimal performance, data should be in compressed nested JSON partitioned by source IP and sorted by date

29

A banking company is currently using an Amazon Redshift cluster with dense storage (DS) nodes to store sensitive data. An audit found that the cluster is unencrypted. Compliance requirements state that a database with sensitive data must be encrypted through a hardware security module (HSM) with automated key rotation. Which of the following three combinations of steps is required to achieve compliance?

Set up a trusted connection with HSM using a client and server certificate with automatic key rotation

Modify the cluster with an HSM encryption option and automatic key rotation

Enable HSM with key rotation through the AWS CL

To achieve compliance, one can set up a trusted connection with HSM using a client and server certificate, modify the cluster with an HSM encryption option and enable HSM with key rotation through CLI.

30

A company is planning to do a proof of concept for a machine learning (ML) project using Amazon SageMaker with a subset of existing on-premises data hosted in the company’s 3 TB data warehouse. For part of the project, AWS Direct Connect is established and tested. To prepare the data for ML, data analysts are performing data curation. The data analysts want to perform multiple steps, including mapping, dropping null fields, resolving choice, and splitting fields. The company needs the fastest solution to curate the data for this project. Which solution meets these requirements?

Ingest data into Amazon S3 using AWS DMS.

Just ingest data into Amazon S3 using AWS DMS to meet the requirements.

31

An insurance company has raw data in JSON format that is sent without a predefined schedule through an AmazonKinesis Data Firehose delivery stream to an Amazon S3 bucket. An AWS Glue crawler is scheduled to run every 8 hours to update the schema in the data catalog of the tables stored in the S3 bucket. Data analysts analyze the data using Apache Spark SQL on Amazon EMR set up with AWS Glue Data Catalog as the metastore. Data analysts say that, occasionally, the data they receive is stale. A data engineer needs to provide access to the most up-to-date data. Which solution meets these requirements?

Create an external schema based on the AWS Glue Data Catalog on the existing Amazon Redshift cluster to query new data in Amazon S3 with Amazon Redshift Spectrum

Create an external schema based on the AWS Glue Data Catalog on the existing Amazon Redshift cluster to query new data in Amazon S3 with Amazon Redshift Spectrum

32

A media content company has a streaming playback application. The company wants to collect and analyze the data to provide near-real-time feedback on playback issues. The company needs to consume this data and return results within 30 seconds according to the service-level agreement (SLA). The company needs the consumer to identify playback issues, such as quality during a specified timeframe. The data will be emitted JSON and may change schemas overtime. Which solution will allow the company to collect data for processing while meeting these requirements?

Send the data to Amazon Managed Streaming for Kafka and configure an Amazon Kinesis Analytics for Java application as the consumer. The application will consume the data and process it to identify potential playback issues. Persist the raw data to Amazon DynamoDB.

Send the data to Amazon Managed Streaming for Kafka and configure an Amazon Kinesis Analytics for Java application as the consumer. The application will consume the data and process it to identify potential playback issues. Persist the raw data to Amazon DynamoDB.

33

Which of these services is a fast, cloud-powered business intelligence (BI) service that makes it easy for you to deliver insights to everyone in your organization?

Amazon QuickSight

QuickSight is a fast, cloud-powered business intelligence (BI) service that makes it easy for you to deliver insights to everyone in your organization.

34

A company is migrating its existing on-premises ETL jobs to Amazon EMR. The code consists of a series of jobs written in Java. The company needs to reduce overheads for the system administrators without changing the underlying code. Due to the sensitivity of the data, compliance requires that the company use root device volume encryption on all nodes in the cluster. Corporate standards require that environments be provisioned though AWS CloudFormation when possible. Which solution satisfies these requirements?

Create a custom AMI with encrypted root device volumes. Configure Amazon EMR to use the custom AMI using the CustomAmild property in the CloudFormation template.

Create a custom AMI with encrypted root device volumes. Configure Amazon EMR to use the custom AMI using the CustomAmild property in the CloudFormation template.

35

Which of these is a managed service in the AWS Cloud that makes it simple and cost-effective to set up, manage, and scale a search solution for your website or application?

Amazon CloudSearch

Amazon CloudSearch is a managed service in the AWS Cloud that makes it simple and cost-effective to set up, manage, and scale a search solution for your website or application.

36

A Publisher website captures user activity and sends clickstream data to Amazon Kinesis Data Streams. The Publisher wants to design a cost-effective solution to process the data to create a timeline of user activity within a session. The solution must be able to scale depending on the number of active sessions. Which solution meets these requirements?

Include a session identifier in the clickstream data from the Publisher website and use it as the partition key for the stream. Use the Kinesis Client Library (KCL) in consumer applications to retrieve the data from the stream and perform the processing. Deploy the consumer application on Amazon EC2 instances in an EC2 Auto Scaling group. Use an AWS Lambda function to reshard the stream based upon Amazon CloudWatch alarms.

Include a session identifier in the clickstream data from the Publisher website and use it as the partition key for the stream. Use the Kinesis Client Library (KCL) in consumer applications to retrieve the data from the stream and perform the processing. Deploy the consumer application on Amazon EC2 instances in an EC2 Auto Scaling group. Use an AWS Lambda function to reshard the stream based upon Amazon CloudWatch alarms. This solution will meet the requirements.

37

Changes made to a security group attached to an Application Load Balancer resulted in connectivity issues for a company's production web application. The Network Engineer needs to lock down permissions for the company's AWS account, automate auditing for any changes, and set up notifications. What actions should accomplish this?

Configure IAM role policies to lock down permissions for specific users. Configure Amazon GuardDuty to audit and monitor configuration changes, and configure Amazon SNS to send notifications.

Configure IAM role policies to lock down permissions for specific users. Configure Amazon GuardDuty to audit and monitor configuration changes, and configure Amazon SNS to send notifications.

38

A DevOps engineer is writing an AWS CloudFormation template to stand up a web service that will run on Amazon EC2 instances in a private subnet behind an ELB Application Load Balancer. The Engineer must ensure that the service can accept requests from clients that have IPv6 addresses. Which configuration items should the engineer incorporate into the CloudFormation template to allow IPv6 clients to access the web service?

Associate an IPv6 CIDR block with the Amazon VPC and subnets where the EC2 instances will live. Create route table entries for the IPv6 network, use EC2 instance types that support IPv6, and assign IPv6 addresses to each EC2 instance.

Associate an IPv6 CIDR block with the Amazon VPC and subnets where the EC2 instances will live. Create route table entries for the IPv6 network, use EC2 instance types that support IPv6, and assign IPv6 addresses to each EC2 instance

39

A US-based sneaker retail company launched its global website. All the transaction data is stored in Amazon RDS and curated historic transaction data is stored in Amazon Redshift in the us-east-1 Region. The business intelligence (BI) team wants to enhance the user experience by providing a dashboard for sneaker trends. The BI team decides to use Amazon QuickSight to render the website dashboards. During development, a team in Japan provisioned Amazon QuickSight in ap-northeast-1. The team is having difficulty connecting Amazon QuickSight from ap-northeast-1 to Amazon Redshift in us-east-1. Which solution will solve this issue and meet the requirements?

Create a VPC endpoint from the Amazon QuickSight VPC to the Amazon Redshift VPC so Amazon QuickSight can access data from Amazon Redshift.

Create a VPC endpoint from the Amazon QuickSight VPC to the Amazon Redshift VPC so Amazon QuickSight can access data from Amazon Redshift. This will solve the issue and meet the requirements.

40

Which of the following is a fully managed extract, transform, and load (ETL) service?

AWS Glue AWS Glue is a fully managed extract, transform, and load (ETL) service.

41

MultiPan, a small company with huge clientele, was facing a storage crunch, and it wants the resources to be connected to the Internet. What is the ideal solution?

Using public subnets would be the ideal solution.

42

A gaming company has recently acquired a successful iOS game, which is particularly popular during the holiday season. The company has decided to add a leaderboard to the game that uses Amazon DynamoDB. The application load is expected to ramp up over the holiday season. Which solution will meet these requirements at the lowest cost?

DynamoDB with on-demand capacity mode

DynamoDB with on-demand capacity mode will meet the requirements at the lowest cost.

43

Which of the following is an online backup and storage system?

Amazon Simple Storage System

Amazon S3 is a simple storage and online backup system.

44

A SysOps Administrator created an AWS CloudFormation template for the first time. The stack failed with a status of ROLLBACK\_COMPLETE. The Administrator identified and resolved the template issue causing the failure. How should the Administrator continue with the stack deployment?

Delete the failed stack and create a new stack

Administrator should delete the failed stack and create a new stack to continue with the stack development.

45

Changes made to a security group attached to an Application Load Balancer resulted in connectivity issues for a company's production web application. The Network Engineer needs to lock down permissions for the company's AWS account, automate auditing for any changes, and set up notifications. What actions should accomplish this?

Configure IAM role policies to lock down permissions for specific users. Configure Amazon GuardDuty to audit and monitor configuration changes, and configure Amazon SNS to send notifications.

46

In case of a disaster, which of the following activities will you perform?

Backup your mission critical data

47

A DevOps Engineer is implementing a mechanism for canary testing an application on AWS. The application was recently modified and went through security, unit, and functional testing. The application needs to be deployed on an AutoScaling group and must use a Classic Load Balancer. Which design meets the requirement for canary testing?

Create a single Classic Load Balancer and an Auto Scaling group for blue/green environments. Use Amazon Route 53 and create A records for Classic Load Balancer IPs. Adjust traffic using A records.

48

You are preparing to launch Amazon WorkSpaces and need to configure the appropriate networking resources. What must be configured to meet this requirement?

At least two subnets in different Availability Zones

49

A company is providing analytics services to its marketing and human resources (HR) departments. The departments can only access the data through their business intelligence (BI) tools, which run Presto queries on an Amazon EMR cluster that uses the EMR File System (EMRFS). The marketing data analyst must be granted access to the advertising table only. The HR data analyst must be granted access to the personnel table only. Which approach will satisfy these requirements?

Create separate IAM roles for the marketing and HR users. Assign the roles with AWS Glue resource-based policies to access their corresponding tables in the AWS Glue Data Catalog. Configure Presto to use the AWS Glue Data Catalog as the Apache Hive metastore.

**EXPLANATION**

To meet the requirements, create separate IAM roles for the marketing and HR users. Assign the roles with AWS Glue resource-based policies to access their corresponding tables in the AWS Glue Data Catalog. Configure Presto to use the AWS Glue Data Catalog as the Apache Hive metastore.

50

Which of the following allows your HTTP backend to control and accept only requests originating from Amazon API Gateway, even if the backend is publicly accessible?

Client-Side SSL Certificates

Client-Side SSL Certificates allows your HTTP backend to control and accept only requests originating from Amazon API Gateway, even if the backend is publicly accessible.