Google

Exam Questions Professional-Data-Engineer

Google Professional Data Engineer Exam

NEW QUESTION 1
- (Exam Topic 1)
Your startup has never implemented a formal security policy. Currently, everyone in the company has access to the datasets stored in Google BigQuery. Teams have freedom to use the service as they see fit, and they have not documented their use cases. You have been asked to secure the data warehouse. You need to discover what everyone is doing. What should you do first?

A. Use Google Stackdriver Audit Logs to review data access.
B. Get the identity and access management IIAM) policy of each table
C. Use Stackdriver Monitoring to see the usage of BigQuery query slots.
D. Use the Google Cloud Billing API to see what account the warehouse is being billed to.

Answer: C

NEW QUESTION 2
- (Exam Topic 1)
Your software uses a simple JSON format for all messages. These messages are published to Google Cloud Pub/Sub, then processed with Google Cloud Dataflow to create a real-time dashboard for the CFO. During testing, you notice that some messages are missing in the dashboard. You check the logs, and all messages are being published to Cloud Pub/Sub successfully. What should you do next?

A. Check the dashboard application to see if it is not displaying correctly.
B. Run a fixed dataset through the Cloud Dataflow pipeline and analyze the output.
C. Use Google Stackdriver Monitoring on Cloud Pub/Sub to find the missing messages.
D. Switch Cloud Dataflow to pull messages from Cloud Pub/Sub instead of Cloud Pub/Sub pushing messages to Cloud Dataflow.

Answer: B

NEW QUESTION 3
- (Exam Topic 1)
Your company handles data processing for a number of different clients. Each client prefers to use their own suite of analytics tools, with some allowing direct query access via Google BigQuery. You need to secure the data so that clients cannot see each other's data. You want to ensure appropriate access to the data. Which three steps should you take? (Choose three.)

A. Load data into different partitions.
B. Load data into a different dataset for each client.
C. Put each client's BigQuery dataset into a different table.
D. Restrict a client's dataset to approved users.
E. Only allow a service account to access the datasets.
F. Use the appropriate identity and access management (IAM) roles for each client's users.

Answer: BDF

NEW QUESTION 4
- (Exam Topic 1)
You want to use a database of information about tissue samples to classify future tissue samples as either normal or mutated. You are evaluating an unsupervised anomaly detection method for classifying the tissue samples. Which two characteristic support this method? (Choose two.)

A. There are very few occurrences of mutations relative to normal samples.
B. There are roughly equal occurrences of both normal and mutated samples in the database.
C. You expect future mutations to have different features from the mutated samples in the database.
D. You expect future mutations to have similar features to the mutated samples in the database.
E. You already have labels for which samples are mutated and which are normal in the database.

Answer: BC

NEW QUESTION 5
- (Exam Topic 1)
You want to process payment transactions in a point-of-sale application that will run on Google Cloud Platform. Your user base could grow exponentially, but you do not want to manage infrastructure scaling.
Which Google database service should you use?

A. Cloud SQL
B. BigQuery
C. Cloud Bigtable
D. Cloud Datastore

Answer: A

NEW QUESTION 6
- (Exam Topic 1)
You are deploying 10,000 new Internet of Things devices to collect temperature data in your warehouses globally. You need to process, store and analyze these very large datasets in real time. What should you do?

A. Send the data to Google Cloud Datastore and then export to BigQuery.
B. Send the data to Google Cloud Pub/Sub, stream Cloud Pub/Sub to Google Cloud Dataflow, and store the data in Google BigQuery.
C. Send the data to Cloud Storage and then spin up an Apache Hadoop cluster as needed in Google Cloud Dataproc whenever analysis is required.
D. Export logs in batch to Google Cloud Storage and then spin up a Google Cloud SQL instance, import the data from Cloud Storage, and run an analysis as

needed.

Answer: B

NEW QUESTION 7
- (Exam Topic 1)
You want to use Google Stackdriver Logging to monitor Google BigQuery usage. You need an instant notification to be sent to your monitoring tool when new data is appended to a certain table using an insert job, but you do not want to receive notifications for other tables. What should you do?

A. Make a call to the Stackdriver API to list all logs, and apply an advanced filter.
B. In the Stackdriver logging admin interface, and enable a log sink export to BigQuery.
C. In the Stackdriver logging admin interface, enable a log sink export to Google Cloud Pub/Sub, and subscribe to the topic from your monitoring tool.
D. Using the Stackdriver API, create a project sink with advanced log filter to export to Pub/Sub, and subscribe to the topic from your monitoring tool.

Answer: B

NEW QUESTION 8
- (Exam Topic 1)
Your company is streaming real-time sensor data from their factory floor into Bigtable and they have noticed extremely poor performance. How should the row key be redesigned to improve Bigtable performance on queries that populate real-time dashboards?

A. Use a row key of the form <timestamp>.
B. Use a row key of the form <sensorid>.
C. Use a row key of the form <timestamp>#<sensorid>.
D. Use a row key of the form >#<sensorid>#<timestamp>.

Answer: A

NEW QUESTION 9
- (Exam Topic 1)
Business owners at your company have given you a database of bank transactions. Each row contains the user ID, transaction type, transaction location, and transaction amount. They ask you to investigate what type of machine learning can be applied to the data. Which three machine learning applications can you use? (Choose three.)

A. Supervised learning to determine which transactions are most likely to be fraudulent.
B. Unsupervised learning to determine which transactions are most likely to be fraudulent.
C. Clustering to divide the transactions into N categories based on feature similarity.
D. Supervised learning to predict the location of a transaction.
E. Reinforcement learning to predict the location of a transaction.
F. Unsupervised learning to predict the location of a transaction.

Answer: BCE

NEW QUESTION 10
- (Exam Topic 1)
You work for a car manufacturer and have set up a data pipeline using Google Cloud Pub/Sub to capture anomalous sensor events. You are using a push subscription in Cloud Pub/Sub that calls a custom HTTPS endpoint that you have created to take action of these anomalous events as they occur. Your custom HTTPS endpoint keeps getting an inordinate amount of duplicate messages. What is the most likely cause of these duplicate messages?

A. The message body for the sensor event is too large.
B. Your custom endpoint has an out-of-date SSL certificate.
C. The Cloud Pub/Sub topic has too many messages published to it.
D. Your custom endpoint is not acknowledging messages within the acknowledgement deadline.

Answer: B

NEW QUESTION 10
- (Exam Topic 1)
Your company is in a highly regulated industry. One of your requirements is to ensure individual users have access only to the minimum amount of information required to do their jobs. You want to enforce this requirement with Google BigQuery. Which three approaches can you take? (Choose three.)

A. Disable writes to certain tables.
B. Restrict access to tables by role.
C. Ensure that the data is encrypted at all times.
D. Restrict BigQuery API access to approved users.
E. Segregate data across multiple tables or databases.
F. Use Google Stackdriver Audit Logging to determine policy violations.

Answer: BDF

NEW QUESTION 13
- (Exam Topic 1)
Your company has hired a new data scientist who wants to perform complicated analyses across very large datasets stored in Google Cloud Storage and in a Cassandra cluster on Google Compute Engine. The scientist primarily wants to create labelled data sets for machine learning projects, along with some visualization tasks. She reports that her laptop is not powerful enough to perform her tasks and it is slowing her down. You want to help her perform her tasks. What should you do?

A. Run a local version of Jupiter on the laptop.
B. Grant the user access to Google Cloud Shell.
C. Host a visualization tool on a VM on Google Compute Engine.
D. Deploy Google Cloud Datalab to a virtual machine (VM) on Google Compute Engine.

Answer: B

NEW QUESTION 16
- (Exam Topic 1)
Your company uses a proprietary system to send inventory data every 6 hours to a data ingestion service in the cloud. Transmitted data includes a payload of several fields and the timestamp of the transmission. If there are any concerns about a transmission, the system re-transmits the data. How should you deduplicate the data most efficiency?

A. Assign global unique identifiers (GUID) to each data entry.
B. Compute the hash value of each data entry, and compare it with all historical data.
C. Store each data entry as the primary key in a separate database and apply an index.
D. Maintain a database table to store the hash value and other metadata for each data entry.

Answer: D

NEW QUESTION 17
- (Exam Topic 1)
You designed a database for patient records as a pilot project to cover a few hundred patients in three clinics. Your design used a single database table to represent all patients and their visits, and you used self-joins to generate reports. The server resource utilization was at 50%. Since then, the scope of the project has expanded. The database must now store 100 times more patient records. You can no longer run the reports, because they either take too long or they encounter errors with insufficient compute resources. How should you adjust the database design?

A. Add capacity (memory and disk space) to the database server by the order of 200.
B. Shard the tables into smaller ones based on date ranges, and only generate reports with prespecified date ranges.
C. Normalize the master patient-record table into the patient table and the visits table, and create othernecessary tables to avoid self-join.
D. Partition the table into smaller tables, with one for each clini
E. Run queries against the smaller table pairs, and use unions for consolidated reports.

Answer: B

NEW QUESTION 22
- (Exam Topic 1)
Your company’s on-premises Apache Hadoop servers are approaching end-of-life, and IT has decided to migrate the cluster to Google Cloud Dataproc. A like-for-like migration of the cluster would require 50 TB of Google Persistent Disk per node. The CIO is concerned about the cost of using that much block storage. You want to minimize the storage cost of the migration. What should you do?

A. Put the data into Google Cloud Storage.
B. Use preemptible virtual machines (VMs) for the Cloud Dataproc cluster.
C. Tune the Cloud Dataproc cluster so that there is just enough disk for all data.
D. Migrate some of the cold data into Google Cloud Storage, and keep only the hot data in Persistent Disk.

Answer: B

NEW QUESTION 27
- (Exam Topic 1)
You are creating a model to predict housing prices. Due to budget constraints, you must run it on a single resource-constrained virtual machine. Which learning algorithm should you use?

A. Linear regression
B. Logistic classification
C. Recurrent neural network
D. Feedforward neural network

Answer: A

NEW QUESTION 29
- (Exam Topic 1)
Your company is using WHILECARD tables to query data across multiple tables with similar names. The SQL statement is currently failing with the following error:
Syntax error : Expected end of statement but got “-“ at [4:11] SELECT age
FROM
bigquery-public-data.noaa_gsod.gsod WHERE
age != 99
AND_TABLE_SUFFIX = ‘1929’ ORDER BY
age DESC
Which table name will make the SQL statement work correctly?

A. ‘bigquery-public-data.noaa_gsod.gsod‘
B. bigquery-public-data.noaa_gsod.gsod*
C. ‘bigquery-public-data.noaa_gsod.gsod’*
D. ‘bigquery-public-data.noaa_gsod.gsod*`

Answer: D

NEW QUESTION 31
- (Exam Topic 1)
You create an important report for your large team in Google Data Studio 360. The report uses Google BigQuery as its data source. You notice that visualizations are not showing data that is less than 1 hour old. What should you do?

A. Disable caching by editing the report settings.
B. Disable caching in BigQuery by editing table details.
C. Refresh your browser tab showing the visualizations.
D. Clear your browser history for the past hour then reload the tab showing the virtualizations.

Answer: A

Explanation:
Reference https://support.google.com/datastudio/answer/7020039?hl=en

NEW QUESTION 33
- (Exam Topic 2)
Flowlogistic is rolling out their real-time inventory tracking system. The tracking devices will all send package-tracking messages, which will now go to a single Google Cloud Pub/Sub topic instead of the Apache Kafka cluster. A subscriber application will then process the messages for real-time reporting and store them in Google BigQuery for historical analysis. You want to ensure the package data can be analyzed over time.
Which approach should you take?

A. Attach the timestamp on each message in the Cloud Pub/Sub subscriber application as they are received.
B. Attach the timestamp and Package ID on the outbound message from each publisher device as they are sent to Clod Pub/Sub.
C. Use the NOW () function in BigQuery to record the event's time.
D. Use the automatically generated timestamp from Cloud Pub/Sub to order the data.

Answer: B

NEW QUESTION 34
- (Exam Topic 2)
Flowlogistic's CEO wants to gain rapid insight into their customer base so his sales team can be better informed in the field. This team is not very technical, so they've purchased a visualization tool to simplify the creation of BigQuery reports. However, they've been overwhelmed by all the data in the table, and are spending a lot of money on queries trying to find the data they need. You want to solve their problem in the most cost-effective way. What should you do?

A. Export the data into a Google Sheet for virtualization.
B. Create an additional table with only the necessary columns.
C. Create a view on the table to present to the virtualization tool.
D. Create identity and access management (IAM) roles on the appropriate columns, so only they appear in a query.

Answer: C

NEW QUESTION 39
- (Exam Topic 3)
Given the record streams MJTelco is interested in ingesting per day, they are concerned about the cost of Google BigQuery increasing. MJTelco asks you to provide a design solution. They require a single large data table called tracking_table. Additionally, they want to minimize the cost of daily queries while performing fine-grained analysis of each day's events. They also want to use streaming ingestion. What should you do?

A. Create a table called tracking_table and include a DATE column.
B. Create a partitioned table called tracking_table and include a TIMESTAMP column.
C. Create sharded tables for each day following the pattern tracking_table_YYYYMMDD.
D. Create a table called tracking_table with a TIMESTAMP column to represent the day.

Answer: B

NEW QUESTION 40
- (Exam Topic 3)
MJTelco's Google Cloud Dataflow pipeline is now ready to start receiving data from the 50,000 installations. You want to allow Cloud Dataflow to scale its compute power up as required. Which Cloud Dataflow pipeline configuration setting should you update?

A. The zone
B. The number of workers
C. The disk size per worker
D. The maximum number of workers

Answer: A

NEW QUESTION 44
- (Exam Topic 3)
You need to compose visualizations for operations teams with the following requirements: Which approach meets the requirements?

A. Load the data into Google Sheets, use formulas to calculate a metric, and use filters/sorting to show only suboptimal links in a table.
B. Load the data into Google BigQuery tables, write Google Apps Script that queries the data, calculates the metric, and shows only suboptimal rows in a table in Google Sheets.
C. Load the data into Google Cloud Datastore tables, write a Google App Engine Application that queries all rows, applies a function to derive the metric, and then renders results in a table using the Google charts and visualization API.
D. Load the data into Google BigQuery tables, write a Google Data Studio 360 report that connects to your data, calculates a metric, and then uses a filter expression to show only suboptimal rows in a table.

Answer: C

NEW QUESTION 49
- (Exam Topic 3)
You create a new report for your large team in Google Data Studio 360. The report uses Google BigQuery as its data source. It is company policy to ensure employees can view only the data associated with their region, so you create and populate a table for each region. You need to enforce the regional access policy to the data.
Which two actions should you take? (Choose two.)

A. Ensure all the tables are included in global dataset.
B. Ensure each table is included in a dataset for a region.
C. Adjust the settings for each table to allow a related region-based security group view access.
D. Adjust the settings for each view to allow a related region-based security group view access.
E. Adjust the settings for each dataset to allow a related region-based security group view access.

Answer: BD

NEW QUESTION 52
- (Exam Topic 4)
You are choosing a NoSQL database to handle telemetry data submitted from millions of Internet-of-Things (IoT) devices. The volume of data is growing at 100 TB per year, and each data entry has about 100 attributes. The data processing pipeline does not require atomicity, consistency, isolation, and durability (ACID). However, high availability and low latency are required.
You need to analyze the data by querying against individual fields. Which three databases meet your requirements? (Choose three.)

A. Redis
B. HBase
C. MySQL
D. MongoDB
E. Cassandra
F. HDFS with Hive

Answer: BDF

NEW QUESTION 56
- (Exam Topic 4)
Your company produces 20,000 files every hour. Each data file is formatted as a comma separated values (CSV) file that is less than 4 KB. All files must be ingested on Google Cloud Platform before they can be processed. Your company site has a 200 ms latency to Google Cloud, and your Internet connection bandwidth is limited as 50 Mbps. You currently deploy a secure FTP (SFTP) server on a virtual machine in Google Compute Engine as the data ingestion point. A local SFTP client runs on a dedicated machine to transmit the CSV files as is. The goal is to make reports with data from the previous day available to the executives by 10:00 a.m. each day. This design is barely able to keep up with the current volume, even though the bandwidth utilization is rather low.
You are told that due to seasonality, your company expects the number of files to double for the next three months. Which two actions should you take? (choose two.)

A. Introduce data compression for each file to increase the rate file of file transfer.
B. Contact your internet service provider (ISP) to increase your maximum bandwidth to at least 100 Mbps.
C. Redesign the data ingestion process to use gsutil tool to send the CSV files to a storage bucket in parallel.
D. Assemble 1,000 files into a tape archive (TAR) fil
E. Transmit the TAR files instead, and disassemble the CSV files in the cloud upon receiving them.
F. Create an S3-compatible storage endpoint in your network, and use Google Cloud Storage Transfer Service to transfer on-premices data to the designated storage bucket.

Answer: CE

NEW QUESTION 61
- (Exam Topic 4)
You are designing the database schema for a machine learning-based food ordering service that will predict what users want to eat. Here is some of the information you need to store:
- The user profile: What the user likes and doesn’t like to eat
- The user account information: Name, address, preferred meal times
- The order information: When orders are made, from where, to whom

The database will be used to store all the transactional data of the product. You want to optimize the data schema. Which Google Cloud Platform product should you use?

A. BigQuery
B. Cloud SQL
C. Cloud Bigtable
D. Cloud Datastore

Answer: A

NEW QUESTION 62
- (Exam Topic 4)
You work for a manufacturing plant that batches application log files together into a single log file once a day at 2:00 AM. You have written a Google Cloud Dataflow job to process that log file. You need to make sure the log file in processed once per day as inexpensively as possible. What should you do?

A. Change the processing job to use Google Cloud Dataproc instead.
B. Manually start the Cloud Dataflow job each morning when you get into the office.

C. Create a cron job with Google App Engine Cron Service to run the Cloud Dataflow job.
D. Configure the Cloud Dataflow job as a streaming job so that it processes the log data immediately.

Answer: C

NEW QUESTION 65
- (Exam Topic 5)
Which TensorFlow function can you use to configure a categorical column if you don't know all of the possible values for that column?

A. categorical_column_with_vocabulary_list
B. categorical_column_with_hash_bucket
C. categorical_column_with_unknown_values
D. sparse_column_with_keys

Answer: B

Explanation:
If you know the set of all possible feature values of a column and there are only a few of them, you can use categorical_column_with_vocabulary_list. Each key in the list will get assigned an auto-incremental ID starting from 0.
What if we don't know the set of possible values in advance? Not a problem. We can use categorical_column_with_hash_bucket instead. What will happen is that each possible value in the feature column occupation will be hashed to an integer ID as we encounter them in training.
Reference: https://www.tensorflow.org/tutorials/wide

NEW QUESTION 70
- (Exam Topic 5)
When using Cloud Dataproc clusters, you can access the YARN web interface by configuring a browser to connect through a proxy.

A. HTTPS
B. VPN
C. SOCKS
D. HTTP

Answer: C

Explanation:
When using Cloud Dataproc clusters, configure your browser to use the SOCKS proxy. The SOCKS proxy routes data intended for the Cloud Dataproc cluster through an SSH tunnel.
Reference: https://cloud.google.com/dataproc/docs/concepts/cluster-web-interfaces#interfaces

NEW QUESTION 75
- (Exam Topic 5)
Which of the following job types are supported by Cloud Dataproc (select 3 answers)?

A. Hive
B. Pig
C. YARN
D. Spark

Answer: ABD

Explanation:
Cloud Dataproc provides out-of-the box and end-to-end support for many of the most popular job types, including Spark, Spark SQL, PySpark, MapReduce, Hive, and Pig jobs.
Reference: https://cloud.google.com/dataproc/docs/resources/faq#what_type_of_jobs_can_i_run

NEW QUESTION 76
- (Exam Topic 5)
What is the recommended action to do in order to switch between SSD and HDD storage for your Google Cloud Bigtable instance?

A. create a third instance and sync the data from the two storage types via batch jobs
B. export the data from the existing instance and import the data into a new instance
C. run parallel instances where one is HDD and the other is SDD
D. the selection is final and you must resume using the same storage type

Answer: B

Explanation:
When you create a Cloud Bigtable instance and cluster, your choice of SSD or HDD storage for the cluster is permanent. You cannot use the Google Cloud Platform Console to change the type of storage that is used for the cluster.
If you need to convert an existing HDD cluster to SSD, or vice-versa, you can export the data from the existing instance and import the data into a new instance. Alternatively, you can write
a Cloud Dataflow or Hadoop MapReduce job that copies the data from one instance to another. Reference: https://cloud.google.com/bigtable/docs/choosing-ssd-hdd–

NEW QUESTION 78
- (Exam Topic 5)
Which of these rules apply when you add preemptible workers to a Dataproc cluster (select 2 answers)?

A. Preemptible workers cannot use persistent disk.
B. Preemptible workers cannot store data.
C. If a preemptible worker is reclaimed, then a replacement worker must be added manually.
D. A Dataproc cluster cannot have only preemptible workers.

Answer: BD

Explanation:
The following rules will apply when you use preemptible workers with a Cloud Dataproc cluster: Processing only—Since preemptibles can be reclaimed at any time, preemptible workers do not store data.
Preemptibles added to a Cloud Dataproc cluster only function as processing nodes.
No preemptible-only clusters—To ensure clusters do not lose all workers, Cloud Dataproc cannot create preemptible-only clusters.
Persistent disk size—As a default, all preemptible workers are created with the smaller of 100GB or the primary worker boot disk size. This disk space is used for local caching of data and is not available through HDFS.
The managed group automatically re-adds workers lost due to reclamation as capacity permits. Reference:
https://cloud.google.com/dataproc/docs/concepts/preemptible-vms

NEW QUESTION 81
- (Exam Topic 5)
Does Dataflow process batch data pipelines or streaming data pipelines?

A. Only Batch Data Pipelines
B. Both Batch and Streaming Data Pipelines
C. Only Streaming Data Pipelines
D. None of the above

Answer: B

Explanation:
Dataflow is a unified processing model, and can execute both streaming and batch data pipelines Reference: https://cloud.google.com/dataflow/

NEW QUESTION 82
- (Exam Topic 5)
Which Google Cloud Platform service is an alternative to Hadoop with Hive?

A. Cloud Dataflow
B. Cloud Bigtable
C. BigQuery
D. Cloud Datastore

Answer: C

Explanation:
Apache Hive is a data warehouse software project built on top of Apache Hadoop for providing data summarization, query, and analysis.
Google BigQuery is an enterprise data warehouse. Reference: https://en.wikipedia.org/wiki/Apache_Hive

NEW QUESTION 87
- (Exam Topic 5)
Which of these statements about exporting data from BigQuery is false?

A. To export more than 1 GB of data, you need to put a wildcard in the destination filename.
B. The only supported export destination is Google Cloud Storage.
C. Data can only be exported in JSON or Avro format.
D. The only compression option available is GZIP.

Answer: C

Explanation:
Data can be exported in CSV, JSON, or Avro format. If you are exporting nested or repeated data, then CSV format is not supported.
Reference: https://cloud.google.com/bigquery/docs/exporting-data

NEW QUESTION 92
- (Exam Topic 5)
What are two methods that can be used to denormalize tables in BigQuery?

A. 1) Split table into multiple tables; 2) Use a partitioned table
B. 1) Join tables into one table; 2) Use nested repeated fields
C. 1) Use a partitioned table; 2) Join tables into one table
D. 1) Use nested repeated fields; 2) Use a partitioned table

Answer: B

Explanation:
The conventional method of denormalizing data involves simply writing a fact, along with all its dimensions, into a flat table structure. For example, if you are dealing with sales transactions, you would write each individual fact to a record, along with the accompanying dimensions such as order and customer information. The other method for denormalizing data takes advantage of BigQuery's native support for nested and repeated structures in JSON or Avro input data. Expressing records using nested and repeated structures can provide a more natural representation of the underlying data. In the case of the sales order, the outer part of a JSON structure would contain the order and customer information, and the inner part of the structure would contain the individual line items of the order, which

would be represented as nested, repeated elements.
Reference: https://cloud.google.com/solutions/bigquery-data-warehouse#denormalizing_data

NEW QUESTION 96
- (Exam Topic 5)
Cloud Bigtable is Google's Big Data database service.

A. Relational
B. mySQL
C. NoSQL
D. SQL Server

Answer: C

Explanation:
Cloud Bigtable is Google's NoSQL Big Data database service. It is the same database that Google uses for services, such as Search, Analytics, Maps, and Gmail. It is used for requirements that are low latency and high throughput including Internet of Things (IoT), user analytics, and financial data analysis.
Reference: https://cloud.google.com/bigtable/

NEW QUESTION 98
- (Exam Topic 5)
The CUSTOM tier for Cloud Machine Learning Engine allows you to specify the number of which types of cluster nodes?

A. Workers
B. Masters, workers, and parameter servers
C. Workers and parameter servers
D. Parameter servers

Answer: C

Explanation:
The CUSTOM tier is not a set tier, but rather enables you to use your own cluster specification. When you use this tier, set values to configure your processing cluster according to these guidelines:
You must set TrainingInput.masterType to specify the type of machine to use for your master node. You may set TrainingInput.workerCount to specify the number of workers to use.
You may set TrainingInput.parameterServerCount to specify the number of parameter servers to use.
You can specify the type of machine for the master node, but you can't specify more than one master node. Reference: https://cloud.google.com/ml-engine/docs/training-overview#job_configuration_parameters

NEW QUESTION 100
- (Exam Topic 5)
Which role must be assigned to a service account used by the virtual machines in a Dataproc cluster so they can execute jobs?

A. Dataproc Worker
B. Dataproc Viewer
C. Dataproc Runner
D. Dataproc Editor

Answer: A

Explanation:
Service accounts used with Cloud Dataproc must have Dataproc/Dataproc Worker role (or have all the permissions granted by Dataproc Worker role).
Reference: https://cloud.google.com/dataproc/docs/concepts/service-accounts#important_notes

NEW QUESTION 104
- (Exam Topic 5)
Which of these sources can you not load data into BigQuery from?

A. File upload
B. Google Drive
C. Google Cloud Storage
D. Google Cloud SQL

Answer: D

Explanation:
You can load data into BigQuery from a file upload, Google Cloud Storage, Google Drive, or Google Cloud Bigtable. It is not possible to load data into BigQuery directly from Google Cloud SQL. One way to get data from Cloud SQL to BigQuery would be to export data from Cloud SQL to Cloud Storage and then load it from there.
Reference: https://cloud.google.com/bigquery/loading-data

NEW QUESTION 108
- (Exam Topic 5)
Which of the following is not true about Dataflow pipelines?

A. Pipelines are a set of operations
B. Pipelines represent a data processing job
C. Pipelines represent a directed graph of steps

D. Pipelines can share data between instances

Answer: D

Explanation:
The data and transforms in a pipeline are unique to, and owned by, that pipeline. While your program can create multiple pipelines, pipelines cannot share data or transforms
Reference: https://cloud.google.com/dataflow/model/pipelines

NEW QUESTION 111
- (Exam Topic 5)
Which of these statements about BigQuery caching is true?

A. By default, a query's results are not cached.
B. BigQuery caches query results for 48 hours.
C. Query results are cached even if you specify a destination table.
D. There is no charge for a query that retrieves its results from cache.

Answer: D

Explanation:
When query results are retrieved from a cached results table, you are not charged for the query. BigQuery caches query results for 24 hours, not 48 hours.
Query results are not cached if you specify a destination table.
A query's results are always cached except under certain conditions, such as if you specify a destination table. Reference:
https://cloud.google.com/bigquery/querying-data#query-caching

NEW QUESTION 114
- (Exam Topic 5)
How would you query specific partitions in a BigQuery table?

A. Use the DAY column in the WHERE clause
B. Use the EXTRACT(DAY) clause
C. Use the PARTITIONTIME pseudo-column in the WHERE clause
D. Use DATE BETWEEN in the WHERE clause

Answer: C

Explanation:
Partitioned tables include a pseudo column named _PARTITIONTIME that contains a date-based timestamp for data loaded into the table. To limit a query to particular partitions (such as Jan 1st and 2nd of 2017), use a clause similar to this:
WHERE _PARTITIONTIME BETWEEN TIMESTAMP('2017-01-01') AND TIMESTAMP('2017-01-02')
Reference: https://cloud.google.com/bigquery/docs/partitioned-tables#the_partitiontime_pseudo_column

NEW QUESTION 117
- (Exam Topic 5)
Which is not a valid reason for poor Cloud Bigtable performance?

A. The workload isn't appropriate for Cloud Bigtable.
B. The table's schema is not designed correctly.
C. The Cloud Bigtable cluster has too many nodes.
D. There are issues with the network connection.

Answer: C

Explanation:
The Cloud Bigtable cluster doesn't have enough nodes. If your Cloud Bigtable cluster is overloaded, adding more nodes can improve performance. Use the monitoring tools to check whether the cluster is overloaded.
Reference: https://cloud.google.com/bigtable/docs/performance

NEW QUESTION 119
- (Exam Topic 5)
Scaling a Cloud Dataproc cluster typically involves .

A. increasing or decreasing the number of worker nodes
B. increasing or decreasing the number of master nodes
C. moving memory to run more applications on a single node
D. deleting applications from unused nodes periodically

Answer: A

Explanation:
After creating a Cloud Dataproc cluster, you can scale the cluster by increasing or decreasing the number of worker nodes in the cluster at any time, even when jobs are running on the cluster. Cloud Dataproc clusters are typically scaled to:
1) increase the number of workers to make a job run faster
2) decrease the number of workers to save money
3) increase the number of nodes to expand available Hadoop Distributed Filesystem (HDFS) storage Reference:
https://cloud.google.com/dataproc/docs/concepts/scaling-clusters

NEW QUESTION 120
- (Exam Topic 5)
If you want to create a machine learning model that predicts the price of a particular stock based on its recent price history, what type of estimator should you use?

A. Unsupervised learning
B. Regressor
C. Classifier
D. Clustering estimator

Answer: B

Explanation:
Regression is the supervised learning task for modeling and predicting continuous, numeric variables. Examples include predicting real-estate prices, stock price movements, or student test scores.
Classification is the supervised learning task for modeling and predicting categorical variables. Examples include predicting employee churn, email spam, financial fraud, or student letter grades.
Clustering is an unsupervised learning task for finding natural groupings of observations (i.e. clusters) based on the inherent structure within your dataset. Examples include customer segmentation, grouping similar items in e-commerce, and social network analysis.
Reference: https://elitedatascience.com/machine-learning-algorithms

NEW QUESTION 122
- (Exam Topic 5)
What are the minimum permissions needed for a service account used with Google Dataproc?

A. Execute to Google Cloud Storage; write to Google Cloud Logging
B. Write to Google Cloud Storage; read to Google Cloud Logging
C. Execute to Google Cloud Storage; execute to Google Cloud Logging
D. Read and write to Google Cloud Storage; write to Google Cloud Logging

Answer: D

Explanation:
Service accounts authenticate applications running on your virtual machine instances to other Google Cloud Platform services. For example, if you write an application that reads and writes files on Google Cloud Storage, it must first authenticate to the Google Cloud Storage API. At a minimum, service accounts used with Cloud Dataproc need permissions to read and write to Google Cloud Storage, and to write to Google Cloud Logging.
Reference: https://cloud.google.com/dataproc/docs/concepts/service-accounts#important_notes

NEW QUESTION 124
- (Exam Topic 5)
In order to securely transfer web traffic data from your computer's web browser to the Cloud Dataproc cluster you should use a(n) .

A. VPN connection
B. Special browser
C. SSH tunnel
D. FTP connection

Answer: C

Explanation:
To connect to the web interfaces, it is recommended to use an SSH tunnel to create a secure connection to the master node.
Reference:
https://cloud.google.com/dataproc/docs/concepts/cluster-web-interfaces#connecting_to_the_web_interfaces

NEW QUESTION 129
- (Exam Topic 5)
Which of the following are feature engineering techniques? (Select 2 answers)

A. Hidden feature layers
B. Feature prioritization
C. Crossed feature columns
D. Bucketization of a continuous feature

Answer: CD

Explanation:
Selecting and crafting the right set of feature columns is key to learning an effective model. Bucketization is a process of dividing the entire range of a continuous feature into a set of consecutive
bins/buckets, and then converting the original numerical feature into a bucket ID (as a categorical feature) depending on which bucket that value falls into.
Using each base feature column separately may not be enough to explain the data. To learn the differences between different feature combinations, we can add crossed feature columns to the model.
Reference: https://www.tensorflow.org/tutorials/wide#selecting_and_engineering_features_for_the_model

NEW QUESTION 134
- (Exam Topic 5)
The YARN ResourceManager and the HDFS NameNode interfaces are available on a Cloud Dataproc cluster .

A. application node
B. conditional node
C. master node

D. worker node

Answer: C

Explanation:
The YARN ResourceManager and the HDFS NameNode interfaces are available on a Cloud Dataproc cluster master node. The cluster master-host-name is the name of your Cloud Dataproc cluster followed by an -m suffix—for example, if your cluster is named "my-cluster", the master-host-name would be "my-cluster-m".
Reference: https://cloud.google.com/dataproc/docs/concepts/cluster-web-interfaces#interfaces

NEW QUESTION 135
- (Exam Topic 5)
Which of these is not a supported method of putting data into a partitioned table?

A. If you have existing data in a separate file for each day, then create a partitioned table and upload each file into the appropriate partition.
B. Run a query to get the records for a specific day from an existing table and for the destination table, specify a partitioned table ending with the day in the format "$YYYYMMDD".
C. Create a partitioned table and stream new records to it every day.
D. Use ORDER BY to put a table's rows into chronological order and then change the table's type to "Partitioned".

Answer: D

Explanation:
You cannot change an existing table into a partitioned table. You must create a partitioned table from scratch. Then you can either stream data into it every day and the data will automatically be put in the right partition, or you can load data into a specific partition by using "$YYYYMMDD" at the end of the table name.
Reference: https://cloud.google.com/bigquery/docs/partitioned-tables

NEW QUESTION 138
- (Exam Topic 5)
The for Cloud Bigtable makes it possible to use Cloud Bigtable in a Cloud Dataflow pipeline.

A. Cloud Dataflow connector
B. DataFlow SDK
C. BiqQuery API
D. BigQuery Data Transfer Service

Answer: A

Explanation:
The Cloud Dataflow connector for Cloud Bigtable makes it possible to use Cloud Bigtable in a Cloud Dataflow pipeline. You can use the connector for both batch and streaming operations.
Reference: https://cloud.google.com/bigtable/docs/dataflow-hbase

NEW QUESTION 141
- (Exam Topic 5)
Which action can a Cloud Dataproc Viewer perform?

A. Submit a job.
B. Create a cluster.
C. Delete a cluster.
D. List the jobs.

Answer: D

Explanation:
A Cloud Dataproc Viewer is limited in its actions based on its role. A viewer can only list clusters, get cluster details, list jobs, get job details, list operations, and get operation details.
Reference: https://cloud.google.com/dataproc/docs/concepts/iam#iam_roles_and_cloud_dataproc_operations_summary

NEW QUESTION 146
- (Exam Topic 5)
Which of the following is NOT true about Dataflow pipelines?

A. Dataflow pipelines are tied to Dataflow, and cannot be run on any other runner
B. Dataflow pipelines can consume data from other Google Cloud services
C. Dataflow pipelines can be programmed in Java
D. Dataflow pipelines use a unified programming model, so can work both with streaming and batch data sources

Answer: A

Explanation:
Dataflow pipelines can also run on alternate runtimes like Spark and Flink, as they are built using the Apache Beam SDKs
Reference: https://cloud.google.com/dataflow/

NEW QUESTION 148
- (Exam Topic 5)
Which Cloud Dataflow / Beam feature should you use to aggregate data in an unbounded data source every hour based on the time when the data entered the pipeline?

A. An hourly watermark
B. An event time trigger
C. The with Allowed Lateness method
D. A processing time trigger

Answer: D

Explanation:
When collecting and grouping data into windows, Beam uses triggers to determine when to emit the aggregated results of each window.
Processing time triggers. These triggers operate on the processing time – the time when the data element is processed at any given stage in the pipeline.
Event time triggers. These triggers operate on the event time, as indicated by the timestamp on each data
element. Beam's default trigger is event time-based.
Reference: https://beam.apache.org/documentation/programming-guide/#triggers

NEW QUESTION 152
- (Exam Topic 5)
You are planning to use Google's Dataflow SDK to analyze customer data such as displayed below. Your project requirement is to extract only the customer name from the data source and then write to an output PCollection.
Tom,555 X street Tim,553 Y street Sam, 111 Z street
Which operation is best suited for the above data processing requirement?

A. ParDo
B. Sink API
C. Source API
D. Data extraction

Answer: A

Explanation:
In Google Cloud dataflow SDK, you can use the ParDo to extract only a customer name of each element in your PCollection.
Reference: https://cloud.google.com/dataflow/model/par-do

NEW QUESTION 155
- (Exam Topic 6)
You have enabled the free integration between Firebase Analytics and Google BigQuery. Firebase now automatically creates a new table daily in BigQuery in the format app_events_YYYYMMDD. You want to query all of the tables for the past 30 days in legacy SQL. What should you do?

A. Use the TABLE_DATE_RANGE function
B. Use the WHERE_PARTITIONTIME pseudo column
C. Use WHERE date BETWEEN YYYY-MM-DD AND YYYY-MM-DD
D. Use SELECT IF.(date >= YYYY-MM-DD AND date <= YYYY-MM-DD

Answer: A

Explanation:
Reference:
https://cloud.google.com/blog/products/gcp/using-bigquery-and-firebase-analytics-to-understandyour-mobile-ap

NEW QUESTION 159
- (Exam Topic 6)
You have a data pipeline with a Cloud Dataflow job that aggregates and writes time series metrics to Cloud Bigtable. This data feeds a dashboard used by thousands of users across the organization. You need to support additional concurrent users and reduce the amount of time required to write the data. Which two actions should you take? (Choose two.)

A. Configure your Cloud Dataflow pipeline to use local execution
B. Increase the maximum number of Cloud Dataflow workers by setting maxNumWorkers in PipelineOptions
C. Increase the number of nodes in the Cloud Bigtable cluster
D. Modify your Cloud Dataflow pipeline to use the Flatten transform before writing to Cloud Bigtable
E. Modify your Cloud Dataflow pipeline to use the CoGroupByKey transform before writing to Cloud Bigtable

Answer: DE

NEW QUESTION 162
- (Exam Topic 6)
You are running a pipeline in Cloud Dataflow that receives messages from a Cloud Pub/Sub topic and writes the results to a BigQuery dataset in the EU. Currently, your pipeline is located in europe-west4 and has a maximum of 3 workers, instance type n1-standard-1. You notice that during peak periods, your pipeline is struggling to process records in a timely fashion, when all 3 workers are at maximum CPU utilization. Which two actions can you take to increase performance of your pipeline? (Choose two.)

A. Increase the number of max workers
B. Use a larger instance type for your Cloud Dataflow workers
C. Change the zone of your Cloud Dataflow pipeline to run in us-central1
D. Create a temporary table in Cloud Bigtable that will act as a buffer for new dat
E. Create a new step in your pipeline to write to this table first, and then create a new pipeline to write from Cloud Bigtable to BigQuery
F. Create a temporary table in Cloud Spanner that will act as a buffer for new dat
G. Create a new step in your pipeline to write to this table first, and then create a new pipeline to write from Cloud Spanner to BigQuery

Answer: BE

NEW QUESTION 163
- (Exam Topic 6)
You work for a mid-sized enterprise that needs to move its operational system transaction data from an on-premises database to GCP. The database is about 20 TB in size. Which database should you choose?

A. Cloud SQL
B. Cloud Bigtable
C. Cloud Spanner
D. Cloud Datastore

Answer: A

NEW QUESTION 168
- (Exam Topic 6)
A shipping company has live package-tracking data that is sent to an Apache Kafka stream in real time. This is then loaded into BigQuery. Analysts in your company want to query the tracking data in BigQuery to analyze geospatial trends in the lifecycle of a package. The table was originally created with ingest-date partitioning. Over time, the query processing time has increased. You need to implement a change that would improve query performance in BigQuery. What should you do?

A. Implement clustering in BigQuery on the ingest date column.
B. Implement clustering in BigQuery on the package-tracking ID column.
C. Tier older data onto Cloud Storage files, and leverage extended tables.
D. Re-create the table using data partitioning on the package delivery date.

Answer: A

NEW QUESTION 172
- (Exam Topic 6)
You have a requirement to insert minute-resolution data from 50,000 sensors into a BigQuery table. You expect significant growth in data volume and need the data to be available within 1 minute of ingestion for real-time analysis of aggregated trends. What should you do?

A. Use bq load to load a batch of sensor data every 60 seconds.
B. Use a Cloud Dataflow pipeline to stream data into the BigQuery table.
C. Use the INSERT statement to insert a batch of data every 60 seconds.
D. Use the MERGE statement to apply updates in batch every 60 seconds.

Answer: C

NEW QUESTION 174
- (Exam Topic 6)
Your company maintains a hybrid deployment with GCP, where analytics are performed on your anonymized customer data. The data are imported to Cloud Storage from your data center through parallel uploads to a data transfer server running on GCP. Management informs you that the daily transfers take too long and have asked you to fix the problem. You want to maximize transfer speeds. Which action should you take?

A. Increase the CPU size on your server.
B. Increase the size of the Google Persistent Disk on your server.
C. Increase your network bandwidth from your datacenter to GCP.
D. Increase your network bandwidth from Compute Engine to Cloud Storage.

Answer: C

NEW QUESTION 176
- (Exam Topic 6)
You receive data files in CSV format monthly from a third party. You need to cleanse this data, but every third month the schema of the files changes. Your requirements for implementing these transformations include:
- Executing the transformations on a schedule
- Enabling non-developer analysts to modify transformations
- Providing a graphical tool for designing transformations

What should you do?

A. Use Cloud Dataprep to build and maintain the transformation recipes, and execute them on a scheduled basis
B. Load each month’s CSV data into BigQuery, and write a SQL query to transform the data to a standard schem
C. Merge the transformed tables together with a SQL query
D. Help the analysts write a Cloud Dataflow pipeline in Python to perform the transformatio
E. The Python code should be stored in a revision control system and modified as the incoming data’s schema changes
F. Use Apache Spark on Cloud Dataproc to infer the schema of the CSV file before creating a Dataframe.Then implement the transformations in Spark SQL before writing the data out to Cloud Storage and loading into BigQuery

Answer: D

NEW QUESTION 178
- (Exam Topic 6)
As your organization expands its usage of GCP, many teams have started to create their own projects. Projects are further multiplied to accommodate different stages of deployments and target audiences. Each project requires unique access control configurations. The central IT team needs to have access to all projects. Furthermore, data from Cloud Storage buckets and BigQuery datasets must be shared for use in other projects in an ad hoc way. You want to simplify access control management by minimizing the number of policies. Which two steps should you take? Choose 2 answers.

A. Use Cloud Deployment Manager to automate access provision.
B. Introduce resource hierarchy to leverage access control policy inheritance.
C. Create distinct groups for various teams, and specify groups in Cloud IAM policies.
D. Only use service accounts when sharing data for Cloud Storage buckets and BigQuery datasets.
E. For each Cloud Storage bucket or BigQuery dataset, decide which projects need acces
F. Find all the active members who have access to these projects, and create a Cloud IAM policy to grant access to all these users.

Answer: AC

NEW QUESTION 179
- (Exam Topic 6)
You need to deploy additional dependencies to all of a Cloud Dataproc cluster at startup using an existing initialization action. Company security policies require that Cloud Dataproc nodes do not have access to the
Internet so public initialization actions cannot fetch resources. What should you do?

A. Deploy the Cloud SQL Proxy on the Cloud Dataproc master
B. Use an SSH tunnel to give the Cloud Dataproc cluster access to the Internet
C. Copy all dependencies to a Cloud Storage bucket within your VPC security perimeter
D. Use Resource Manager to add the service account used by the Cloud Dataproc cluster to the Network User role

Answer: D

NEW QUESTION 182
- (Exam Topic 6)
You are a retailer that wants to integrate your online sales capabilities with different in-home assistants, such as Google Home. You need to interpret customer voice commands and issue an order to the backend systems. Which solutions should you choose?

A. Cloud Speech-to-Text API
B. Cloud Natural Language API
C. Dialogflow Enterprise Edition
D. Cloud AutoML Natural Language

Answer: D

NEW QUESTION 187
- (Exam Topic 6)
Your financial services company is moving to cloud technology and wants to store 50 TB of financial timeseries data in the cloud. This data is updated frequently and new data will be streaming in all the time. Your company also wants to move their existing Apache Hadoop jobs to the cloud to get insights into this data. Which product should they use to store the data?

A. Cloud Bigtable
B. Google BigQuery
C. Google Cloud Storage
D. Google Cloud Datastore

Answer: A

Explanation:
Reference: https://cloud.google.com/bigtable/docs/schema-design-time-series

NEW QUESTION 192
- (Exam Topic 6)
You are developing an application that uses a recommendation engine on Google Cloud. Your solution should display new videos to customers based on past views. Your solution needs to generate labels for the entities in videos that the customer has viewed. Your design must be able to provide very fast filtering suggestions based on data from other customer preferences on several TB of data. What should you do?

A. Build and train a complex classification model with Spark MLlib to generate labels and filter the results.Deploy the models using Cloud Datapro
B. Call the model from your application.
C. Build and train a classification model with Spark MLlib to generate label
D. Build and train a second classification model with Spark MLlib to filter results to match customer preference
E. Deploy theModels using Cloud Datapro
F. Call the models from your application.
G. Build an application that calls the Cloud Video Intelligence API to generate label
H. Store data in Cloud Bigtable, and filter the predicted labels to match the user's viewing history to generate preferences.
I. Build an application that calls the Cloud Video Intelligence API to generate label
J. Store data in Cloud SQL, and join and filter the predicted labels to match the user's viewing history to generate preferences.

Answer: C

NEW QUESTION 195
- (Exam Topic 6)
You are developing an application on Google Cloud that will automatically generate subject labels for users' blog posts. You are under competitive pressure to add this feature quickly, and you have no additional developer resources. No one on your team has experience with machine learning. What should you do?

A. Call the Cloud Natural Language API from your applicatio
B. Process the generated Entity Analysis as labels.
C. Call the Cloud Natural Language API from your applicatio
D. Process the generated Sentiment Analysis as labels.

E. Build and train a text classification model using TensorFlo
F. Deploy the model using Cloud Machine Learning Engin
G. Call the model from your application and process the results as labels.
H. Build and train a text classification model using TensorFlo
I. Deploy the model using a KubernetesEngine cluste
J. Call the model from your application and process the results as labels.

Answer: B

NEW QUESTION 198
- (Exam Topic 6)
You operate an IoT pipeline built around Apache Kafka that normally receives around 5000 messages per second. You want to use Google Cloud Platform to create an alert as soon as the moving average over 1 hour drops below 4000 messages per second. What should you do?

A. Consume the stream of data in Cloud Dataflow using Kafka I
B. Set a sliding time window of 1 hour every 5 minute
C. Compute the average when the window closes, and send an alert if the average is less than 4000 messages.
D. Consume the stream of data in Cloud Dataflow using Kafka I
E. Set a fixed time window of 1 hour.Compute the average when the window closes, and send an alert if the average is less than 4000 messages.
F. Use Kafka Connect to link your Kafka message queue to Cloud Pub/Su
G. Use a Cloud Dataflow template to write your messages from Cloud Pub/Sub to Cloud Bigtabl
H. Use Cloud Scheduler to run a script every hour that counts the number of rows created in Cloud Bigtable in the last hou
I. If that number falls below 4000, send an alert.
J. Use Kafka Connect to link your Kafka message queue to Cloud Pub/Su
K. Use a Cloud Dataflow template to write your messages from Cloud Pub/Sub to BigQuer
L. Use Cloud Scheduler to run a script every five minutes that counts the number of rows created in BigQuery in the last hou
M. If that number falls below 4000, send an alert.

Answer: C

NEW QUESTION 203
- (Exam Topic 6)
Your organization has been collecting and analyzing data in Google BigQuery for 6 months. The majority of the data analyzed is placed in a time-partitioned table named events_partitioned. To reduce the cost of queries, your organization created a view called events, which queries only the last 14 days of data. The view is described in legacy SQL. Next month, existing applications will be connecting to BigQuery to read the events data via an ODBC connection. You need to ensure the applications can connect. Which two actions should you take? (Choose two.)

A. Create a new view over events using standard SQL
B. Create a new partitioned table using a standard SQL query
C. Create a new view over events_partitioned using standard SQL
D. Create a service account for the ODBC connection to use for authentication
E. Create a Google Cloud Identity and Access Management (Cloud IAM) role for the ODBC connectionand shared “events”

Answer: AE

NEW QUESTION 205
- (Exam Topic 6)
You operate a logistics company, and you want to improve event delivery reliability for vehicle-based sensors. You operate small data centers around the world to capture these events, but leased lines that provide connectivity from your event collection infrastructure to your event processing infrastructure are unreliable, with unpredictable latency. You want to address this issue in the most cost-effective way. What should you do?

A. Deploy small Kafka clusters in your data centers to buffer events.
B. Have the data acquisition devices publish data to Cloud Pub/Sub.
C. Establish a Cloud Interconnect between all remote data centers and Google.
D. Write a Cloud Dataflow pipeline that aggregates all data in session windows.

Answer: A

NEW QUESTION 208
- (Exam Topic 6)
You need to choose a database to store time series CPU and memory usage for millions of computers. You need to store this data in one-second interval samples. Analysts will be performing real-time, ad hoc analytics against the database. You want to avoid being charged for every query executed and ensure that the schema design will allow for future growth of the dataset. Which database and data model should you choose?

A. Create a table in BigQuery, and append the new samples for CPU and memory to the table
B. Create a wide table in BigQuery, create a column for the sample value at each second, and update the row with the interval for each second
C. Create a narrow table in Cloud Bigtable with a row key that combines the Computer Engine computer identifier with the sample time at each second
D. Create a wide table in Cloud Bigtable with a row key that combines the computer identifier with the sample time at each minute, and combine the values for each second as column data.

Answer: D

NEW QUESTION 210
- (Exam Topic 6)
You need to choose a database for a new project that has the following requirements:
- Fully managed
- Able to automatically scale up

- Transactionally consistent
- Able to scale up to 6 TB
- Able to be queried using SQL Which database do you choose?

A. Cloud SQL
B. Cloud Bigtable
C. Cloud Spanner
D. Cloud Datastore

Answer: C

NEW QUESTION 214
- (Exam Topic 6)
You decided to use Cloud Datastore to ingest vehicle telemetry data in real time. You want to build a storage system that will account for the long-term data growth, while keeping the costs low. You also want to create snapshots of the data periodically, so that you can make a point-in-time (PIT) recovery, or clone a copy of the data for Cloud Datastore in a different environment. You want to archive these snapshots for a long time. Which two methods can accomplish this? Choose 2 answers.

A. Use managed export, and store the data in a Cloud Storage bucket using Nearline or Coldline class.
B. Use managed exportm, and then import to Cloud Datastore in a separate project under a unique namespace reserved for that export.
C. Use managed export, and then import the data into a BigQuery table created just for that export, and delete temporary export files.
D. Write an application that uses Cloud Datastore client libraries to read all the entitie
E. Treat each entity as a BigQuery table row via BigQuery streaming inser
F. Assign an export timestamp for each export, and attach it as an extra column for each ro
G. Make sure that the BigQuery table is partitioned using the export timestamp column.
H. Write an application that uses Cloud Datastore client libraries to read all the entitie
I. Format the exported data into a JSON fil
J. Apply compression before storing the data in Cloud Source Repositories.

Answer: CE

NEW QUESTION 218
- (Exam Topic 6)
You are designing a data processing pipeline. The pipeline must be able to scale automatically as load increases. Messages must be processed at least once, and must be ordered within windows of 1 hour. How should you design the solution?

A. Use Apache Kafka for message ingestion and use Cloud Dataproc for streaming analysis.
B. Use Apache Kafka for message ingestion and use Cloud Dataflow for streaming analysis.
C. Use Cloud Pub/Sub for message ingestion and Cloud Dataproc for streaming analysis.
D. Use Cloud Pub/Sub for message ingestion and Cloud Dataflow for streaming analysis.

Answer: C

NEW QUESTION 222
- (Exam Topic 6)
Your company has a hybrid cloud initiative. You have a complex data pipeline that moves data between cloud provider services and leverages services from each of the cloud providers. Which cloud-native service should you use to orchestrate the entire pipeline?

A. Cloud Dataflow
B. Cloud Composer
C. Cloud Dataprep
D. Cloud Dataproc

Answer: D

NEW QUESTION 225
- (Exam Topic 6)
You have developed three data processing jobs. One executes a Cloud Dataflow pipeline that transforms data uploaded to Cloud Storage and writes results to BigQuery. The second ingests data from on-premises servers and uploads it to Cloud Storage. The third is a Cloud Dataflow pipeline that gets information from third-party data providers and uploads the information to Cloud Storage. You need to be able to schedule and monitor the execution of these three workflows and manually execute them when needed. What should you do?

A. Create a Direct Acyclic Graph in Cloud Composer to schedule and monitor the jobs.
B. Use Stackdriver Monitoring and set up an alert with a Webhook notification to trigger the jobs.
C. Develop an App Engine application to schedule and request the status of the jobs using GCP API calls.
D. Set up cron jobs in a Compute Engine instance to schedule and monitor the pipelines using GCP API calls.

Answer: D

NEW QUESTION 229
- (Exam Topic 6)
After migrating ETL jobs to run on BigQuery, you need to verify that the output of the migrated jobs is the same as the output of the original. You've loaded a table containing the output of the original job and want to compare the contents with output from the migrated job to show that they are identical. The tables do not contain a primary key column that would enable you to join them together for comparison.
What should you do?

A. Select random samples from the tables using the RAND() function and compare the samples.

B. Select random samples from the tables using the HASH() function and compare the samples.
C. Use a Dataproc cluster and the BigQuery Hadoop connector to read the data from each table and calculate a hash from non-timestamp columns of the table after sortin
D. Compare the hashes of each table.
E. Create stratified random samples using the OVER() function and compare equivalent samples from each table.

Answer: B

NEW QUESTION 234
- (Exam Topic 6)
You plan to deploy Cloud SQL using MySQL. You need to ensure high availability in the event of a zone failure. What should you do?

A. Create a Cloud SQL instance in one zone, and create a failover replica in another zone within the same region.
B. Create a Cloud SQL instance in one zone, and create a read replica in another zone within the same region.
C. Create a Cloud SQL instance in one zone, and configure an external read replica in a zone in a different region.
D. Create a Cloud SQL instance in a region, and configure automatic backup to a Cloud Storage bucket in the same region.

Answer: C

NEW QUESTION 236
- (Exam Topic 6)
You are integrating one of your internal IT applications and Google BigQuery, so users can query BigQuery from the application's interface. You do not want individual users to authenticate to BigQuery and you do not want to give them access to the dataset. You need to securely access BigQuery from your IT application.
What should you do?

A. Create groups for your users and give those groups access to the dataset
B. Integrate with a single sign-on (SSO) platform, and pass each user's credentials along with the query request
C. Create a service account and grant dataset access to that accoun
D. Use the service account's private key to access the dataset
E. Create a dummy user and grant dataset access to that use
F. Store the username and password for that user in a file on the files system, and use those credentials to access the BigQuery dataset

Answer: C

NEW QUESTION 238
- (Exam Topic 6)
You are designing storage for 20 TB of text files as part of deploying a data pipeline on Google Cloud. Your input data is in CSV format. You want to minimize the cost of querying aggregate values for multiple users who will query the data in Cloud Storage with multiple engines. Which storage service and schema design should you use?

A. Use Cloud Bigtable for storag
B. Install the HBase shell on a Compute Engine instance to query the Cloud Bigtable data.
C. Use Cloud Bigtable for storag
D. Link as permanent tables in BigQuery for query.
E. Use Cloud Storage for storag
F. Link as permanent tables in BigQuery for query.
G. Use Cloud Storage for storag
H. Link as temporary tables in BigQuery for query.

Answer: A

NEW QUESTION 242
- (Exam Topic 6)
You use a dataset in BigQuery for analysis. You want to provide third-party companies with access to the same dataset. You need to keep the costs of data sharing low and ensure that the data is current. Which solution should you choose?

A. Create an authorized view on the BigQuery table to control data access, and provide third-party companies with access to that view.
B. Use Cloud Scheduler to export the data on a regular basis to Cloud Storage, and provide third-party companies with access to the bucket.
C. Create a separate dataset in BigQuery that contains the relevant data to share, and provide third-party companies with access to the new dataset.
D. Create a Cloud Dataflow job that reads the data in frequent time intervals, and writes it to the relevant BigQuery dataset or Cloud Storage bucket for third-party companies to use.

Answer: B

NEW QUESTION 246
- (Exam Topic 6)
You are managing a Cloud Dataproc cluster. You need to make a job run faster while minimizing costs, without losing work in progress on your clusters. What should you do?

A. Increase the cluster size with more non-preemptible workers.
B. Increase the cluster size with preemptible worker nodes, and configure them to forcefully decommission.
C. Increase the cluster size with preemptible worker nodes, and use Cloud Stackdriver to trigger a script to preserve work.
D. Increase the cluster size with preemptible worker nodes, and configure them to use graceful decommissioning.

Answer: D

Explanation:

Reference https://cloud.google.com/dataproc/docs/concepts/configuring-clusters/flex

NEW QUESTION 247
- (Exam Topic 6)
You are designing an Apache Beam pipeline to enrich data from Cloud Pub/Sub with static reference data from BigQuery. The reference data is small enough to fit in memory on a single worker. The pipeline should write enriched results to BigQuery for analysis. Which job type and transforms should this pipeline use?

A. Batch job, PubSubIO, side-inputs
B. Streaming job, PubSubIO, JdbcIO, side-outputs
C. Streaming job, PubSubIO, BigQueryIO, side-inputs
D. Streaming job, PubSubIO, BigQueryIO, side-outputs

Answer: A

NEW QUESTION 252
- (Exam Topic 6)
Your globally distributed auction application allows users to bid on items. Occasionally, users place identical bids at nearly identical times, and different application servers process those bids. Each bid event contains the item, amount, user, and timestamp. You want to collate those bid events into a single location in real time to determine which user bid first. What should you do?

A. Create a file on a shared file and have the application servers write all bid events to that fil
B. Process the file with Apache Hadoop to identify which user bid first.
C. Have each application server write the bid events to Cloud Pub/Sub as they occu
D. Push the events from Cloud Pub/Sub to a custom endpoint that writes the bid event information into Cloud SQL.
E. Set up a MySQL database for each application server to write bid events int
F. Periodically query each of those distributed MySQL databases and update a master MySQL database with bid event information.
G. Have each application server write the bid events to Google Cloud Pub/Sub as they occu
H. Use a pull subscription to pull the bid events using Google Cloud Dataflo
I. Give the bid for each item to the userIn the bid event that is processed first.

Answer: C

NEW QUESTION 257
- (Exam Topic 6)
You want to analyze hundreds of thousands of social media posts daily at the lowest cost and with the fewest steps.
You have the following requirements:
- You will batch-load the posts once per day and run them through the Cloud Natural Language API.
- You will extract topics and sentiment from the posts.
- You must store the raw posts for archiving and reprocessing.
- You will create dashboards to be shared with people both inside and outside your organization.

You need to store both the data extracted from the API to perform analysis as well as the raw social media posts for historical archiving. What should you do?

A. Store the social media posts and the data extracted from the API in BigQuery.
B. Store the social media posts and the data extracted from the API in Cloud SQL.
C. Store the raw social media posts in Cloud Storage, and write the data extracted from the API into BigQuery.
D. Feed to social media posts into the API directly from the source, and write the extracted data from the API into BigQuery.

Answer: D

NEW QUESTION 262
- (Exam Topic 6)
You are operating a streaming Cloud Dataflow pipeline. Your engineers have a new version of the pipeline with a different windowing algorithm and triggering strategy. You want to update the running pipeline with the new version. You want to ensure that no data is lost during the update. What should you do?

A. Update the Cloud Dataflow pipeline inflight by passing the --update option with the --jobName set to the existing job name
B. Update the Cloud Dataflow pipeline inflight by passing the --update option with the --jobName set to a new unique job name
C. Stop the Cloud Dataflow pipeline with the Cancel optio
D. Create a new Cloud Dataflow job with the updated code
E. Stop the Cloud Dataflow pipeline with the Drain optio
F. Create a new Cloud Dataflow job with the updated code

Answer: A

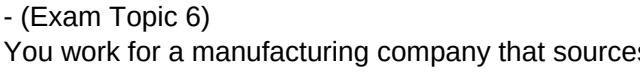
NEW QUESTION 263
- (Exam Topic 6)
You have historical data covering the last three years in BigQuery and a data pipeline that delivers new data to BigQuery daily. You have noticed that when the Data Science team runs a query filtered on a date column and limited to 30–90 days of data, the query scans the entire table. You also noticed that your bill is increasing more quickly than you expected. You want to resolve the issue as cost-effectively as possible while maintaining the ability to conduct SQL queries. What should you do?

A. Re-create the tables using DD
B. Partition the tables by a column containing a TIMESTAMP or DATE Type.
C. Recommend that the Data Science team export the table to a CSV file on Cloud Storage and use Cloud Datalab to explore the data by reading the files directly.
D. Modify your pipeline to maintain the last 30–90 days of data in one table and the longer history in a different table to minimize full table scans over the entire history.
E. Write an Apache Beam pipeline that creates a BigQuery table per da

F. Recommend that the Data Science team use wildcards on the table name suffixes to select the data they need.

Answer: C

NEW QUESTION 264
- (Exam Topic 6)
You are using Google BigQuery as your data warehouse. Your users report that the following simple query is running very slowly, no matter when they run the query:
SELECT country, state, city FROM [myproject:mydataset.mytable] GROUP BY country
You check the query plan for the query and see the following output in the Read section of Stage:1:



What is the most likely cause of the delay for this query?

A. Users are running too many concurrent queries in the system
B. The [myproject:mydataset.mytable] table has too many partitions
C. Either the state or the city columns in the [myproject:mydataset.mytable] table have too many NULL values
D. Most rows in the [myproject:mydataset.mytable] table have the same value in the country column, causing data skew

Answer: A

NEW QUESTION 266
- (Exam Topic 6)
You need to create a data pipeline that copies time-series transaction data so that it can be queried from within BigQuery by your data science team for analysis. Every hour, thousands of transactions are updated with a new status. The size of the intitial dataset is 1.5 PB, and it will grow by 3 TB per day. The data is heavily structured, and your data science team will build machine learning models based on this data. You want to maximize performance and usability for your data science team. Which two strategies should you adopt? Choose 2 answers.

A. Denormalize the data as must as possible.
B. Preserve the structure of the data as much as possible.
C. Use BigQuery UPDATE to further reduce the size of the dataset.
D. Develop a data pipeline where status updates are appended to BigQuery instead of updated.
E. Copy a daily snapshot of transaction data to Cloud Storage and store it as an Avro fil
F. Use BigQuery'ssupport for external data sources to query.

Answer: DE

NEW QUESTION 270
- (Exam Topic 6)
You work for a manufacturing company that sources up to 750 different components, each from a different supplier. You've collected a labeled dataset that has on average 1000 examples for each unique component. Your team wants to implement an app to help warehouse workers recognize incoming components based on a photo of the component. You want to implement the first working version of this app (as Proof-Of-Concept) within a few working days. What should you do?

A. Use Cloud Vision AutoML with the existing dataset.
B. Use Cloud Vision AutoML, but reduce your dataset twice.
C. Use Cloud Vision API by providing custom labels as recognition hints.
D. Train your own image recognition model leveraging transfer learning techniques.

Answer: A

NEW QUESTION 272
- (Exam Topic 6)
You are implementing security best practices on your data pipeline. Currently, you are manually executing jobs as the Project Owner. You want to automate these jobs by taking nightly batch files containing non-public information from Google Cloud Storage, processing them with a Spark Scala job on a Google Cloud Dataproc cluster, and depositing the results into Google BigQuery.
How should you securely run this workload?

A. Restrict the Google Cloud Storage bucket so only you can see the files
B. Grant the Project Owner role to a service account, and run the job with it
C. Use a service account with the ability to read the batch files and to write to BigQuery
D. Use a user account with the Project Viewer role on the Cloud Dataproc cluster to read the batch files and write to BigQuery

Answer: B

NEW QUESTION 274
- (Exam Topic 6)
You are operating a Cloud Dataflow streaming pipeline. The pipeline aggregates events from a Cloud Pub/Sub subscription source, within a window, and sinks the resulting aggregation to a Cloud Storage bucket. The source has consistent throughput. You want to monitor an alert on behavior of the pipeline with Cloud Stackdriver to ensure that it is processing data. Which Stackdriver alerts should you create?

A. An alert based on a decrease of subscription/num_undelivered_messages for the source and a rate of change increase of instance/storage/used_bytes for the destination
B. An alert based on an increase of subscription/num_undelivered_messages for the source and a rate of change decrease of instance/storage/used_bytes for the destination
C. An alert based on a decrease of instance/storage/used_bytes for the source and a rate of change increase of subscription/num_undelivered_messages for the destination
D. An alert based on an increase of instance/storage/used_bytes for the source and a rate of change decrease of subscription/num_undelivered_messages for the

destination

Answer: B

NEW QUESTION 276
- (Exam Topic 6)
You are building a new application that you need to collect data from in a scalable way. Data arrives continuously from the application throughout the day, and you expect to generate approximately 150 GB of JSON data per day by the end of the year. Your requirements are:

- Decoupling producer from consumer
- Space and cost-efficient storage of the raw ingested data, which is to be stored indefinitely
- Near real-time SQL query
- Maintain at least 2 years of historical data, which will be queried with SQ

Which pipeline should you use to meet these requirements?

A. Create an application that provides an AP
B. Write a tool to poll the API and write data to Cloud Storage as gzipped JSON files.
C. Create an application that writes to a Cloud SQL database to store the dat
D. Set up periodic exports of the database to write to Cloud Storage and load into BigQuery.
E. Create an application that publishes events to Cloud Pub/Sub, and create Spark jobs on Cloud Dataproc to convert the JSON data to Avro format, stored on HDFS on Persistent Disk.
F. Create an application that publishes events to Cloud Pub/Sub, and create a Cloud Dataflow pipeline that transforms the JSON event payloads to Avro, writing the data to Cloud Storage and BigQuery.

Answer: A

NEW QUESTION 281
- (Exam Topic 6)
Data Analysts in your company have the Cloud IAM Owner role assigned to them in their projects to allow them to work with multiple GCP products in their projects. Your organization requires that all BigQuery data access logs be retained for 6 months. You need to ensure that only audit personnel in your company can access the data access logs for all projects. What should you do?

A. Enable data access logs in each Data Analyst's projec
B. Restrict access to Stackdriver Logging via Cloud IAM roles.
C. Export the data access logs via a project-level export sink to a Cloud Storage bucket in the Data Analysts' project
D. Restrict access to the Cloud Storage bucket.
E. Export the data access logs via a project-level export sink to a Cloud Storage bucket in a newly created projects for audit log
F. Restrict access to the project with the exported logs.
G. Export the data access logs via an aggregated export sink to a Cloud Storage bucket in a newly created project for audit log
H. Restrict access to the project that contains the exported logs.

Answer: D

NEW QUESTION 285
- (Exam Topic 6)
You work for a global shipping company. You want to train a model on 40 TB of data to predict which ships in each geographic region are likely to cause delivery delays on any given day. The model will be based on multiple attributes collected from multiple sources. Telemetry data, including location in GeoJSON format, will be pulled from each ship and loaded every hour. You want to have a dashboard that shows how many and which ships are likely to cause delays within a region. You want to use a storage solution that has native functionality for prediction and geospatial processing. Which storage solution should you use?

A. BigQuery
B. Cloud Bigtable
C. Cloud Datastore
D. Cloud SQL for PostgreSQL

Answer: A

NEW QUESTION 286
- (Exam Topic 6)
You have data pipelines running on BigQuery, Cloud Dataflow, and Cloud Dataproc. You need to perform health checks and monitor their behavior, and then notify the team managing the pipelines if they fail. You also need to be able to work across multiple projects. Your preference is to use managed products of features of the platform. What should you do?

A. Export the information to Cloud Stackdriver, and set up an Alerting policy
B. Run a Virtual Machine in Compute Engine with Airflow, and export the information to Stackdriver
C. Export the logs to BigQuery, and set up App Engine to read that information and send emails if you find a failure in the logs
D. Develop an App Engine application to consume logs using GCP API calls, and send emails if you find a failure in the logs

Answer: B

NEW QUESTION 287
- (Exam Topic 6)
You work for a bank. You have a labelled dataset that contains information on already granted loan application and whether these applications have been defaulted. You have been asked to train a model to predict default rates for credit applicants.
What should you do?

A. Increase the size of the dataset by collecting additional data.

B. Train a linear regression to predict a credit default risk score.
C. Remove the bias from the data and collect applications that have been declined loans.
D. Match loan applicants with their social profiles to enable feature engineering.

Answer: B

NEW QUESTION 292
- (Exam Topic 6)
You need to copy millions of sensitive patient records from a relational database to BigQuery. The total size of the database is 10 TB. You need to design a solution that is secure and time-efficient. What should you do?

A. Export the records from the database as an Avro fil
B. Upload the file to GCS using gsutil, and then load the Avro file into BigQuery using the BigQuery web UI in the GCP Console.
C. Export the records from the database as an Avro fil
D. Copy the file onto a Transfer Appliance and send itto Google, and then load the Avro file into BigQuery using the BigQuery web UI in the GCP Console.
E. Export the records from the database into a CSV fil
F. Create a public URL for the CSV file, and then use Storage Transfer Service to move the file to Cloud Storag
G. Load the CSV file into BigQuery using the BigQuery web UI in the GCP Console.
H. Export the records from the database as an Avro fil
I. Create a public URL for the Avro file, and then use Storage Transfer Service to move the file to Cloud Storag
J. Load the Avro file into BigQuery using the BigQuery web UI in the GCP Console.

Answer: A

NEW QUESTION 293
- (Exam Topic 6)
Your company receives both batch- and stream-based event data. You want to process the data using Google Cloud Dataflow over a predictable time period. However, you realize that in some instances data can arrive late or out of order. How should you design your Cloud Dataflow pipeline to handle data that is late or out of order?

A. Set a single global window to capture all the data.
B. Set sliding windows to capture all the lagged data.
C. Use watermarks and timestamps to capture the lagged data.
D. Ensure every datasource type (stream or batch) has a timestamp, and use the timestamps to define the logic for lagged data.

Answer: B

NEW QUESTION 298
- (Exam Topic 6)
You are designing a cloud-native historical data processing system to meet the following conditions:
- The data being analyzed is in CSV, Avro, and PDF formats and will be accessed by multiple analysis tools including Cloud Dataproc, BigQuery, and Compute Engine.
- A streaming data pipeline stores new data daily.
- Peformance is not a factor in the solution.
- The solution design should maximize availability.

How should you design data storage for this solution?

A. Create a Cloud Dataproc cluster with high availabilit
B. Store the data in HDFS, and peform analysis as needed.
C. Store the data in BigQuer
D. Access the data using the BigQuery Connector or Cloud Dataproc and Compute Engine.
E. Store the data in a regional Cloud Storage bucke
F. Aceess the bucket directly using Cloud Dataproc, BigQuery, and Compute Engine.
G. Store the data in a multi-regional Cloud Storage bucke
H. Access the data directly using Cloud Dataproc, BigQuery, and Compute Engine.

Answer: C

NEW QUESTION 302
- (Exam Topic 6)
You’re using Bigtable for a real-time application, and you have a heavy load that is a mix of read and writes. You’ve recently identified an additional use case and need to perform hourly an analytical job to calculate certain statistics across the whole database. You need to ensure both the reliability of your production application as well as the analytical workload.
What should you do?

A. Export Bigtable dump to GCS and run your analytical job on top of the exported files.
B. Add a second cluster to an existing instance with a multi-cluster routing, use live-traffic app profile for your regular workload and batch-analytics profile for the analytics workload.
C. Add a second cluster to an existing instance with a single-cluster routing, use live-traffic app profile for your regular workload and batch-analytics profile for the analytics workload.
D. Increase the size of your existing cluster twice and execute your analytics workload on your new resized cluster.

Answer: B

NEW QUESTION 305
- (Exam Topic 6)

You are deploying MariaDB SQL databases on GCE VM Instances and need to configure monitoring and alerting. You want to collect metrics including network connections, disk IO and replication status from MariaDB with minimal development effort and use StackDriver for dashboards and alerts.
What should you do?

A. Install the OpenCensus Agent and create a custom metric collection application with a StackDriver exporter.
B. Place the MariaDB instances in an Instance Group with a Health Check.
C. Install the StackDriver Logging Agent and configure fluentd in_tail plugin to read MariaDB logs.
D. Install the StackDriver Agent and configure the MySQL plugin.

Answer: C

NEW QUESTION 306
- (Exam Topic 6)
You are working on a niche product in the image recognition domain. Your team has developed a model that is dominated by custom C++ TensorFlow ops your team has implemented. These ops are used inside your main training loop and are performing bulky matrix multiplications. It currently takes up to several days to train a model. You want to decrease this time significantly and keep the cost low by using an accelerator on Google Cloud. What should you do?

A. Use Cloud TPUs without any additional adjustment to your code.
B. Use Cloud TPUs after implementing GPU kernel support for your customs ops.
C. Use Cloud GPUs after implementing GPU kernel support for your customs ops.
D. Stay on CPUs, and increase the size of the cluster you're training your model on.

Answer: B

NEW QUESTION 311
- (Exam Topic 6)
You have a petabyte of analytics data and need to design a storage and processing platform for it. You must be able to perform data warehouse-style analytics on the data in Google Cloud and expose the dataset as files for batch analysis tools in other cloud providers. What should you do?

A. Store and process the entire dataset in BigQuery.
B. Store and process the entire dataset in Cloud Bigtable.
C. Store the full dataset in BigQuery, and store a compressed copy of the data in a Cloud Storage bucket.
D. Store the warm data as files in Cloud Storage, and store the active data in BigQuer
E. Keep this ratio as 80% warm and 20% active.

Answer: D

NEW QUESTION 314
- (Exam Topic 6)
You store historic data in Cloud Storage. You need to perform analytics on the historic data. You want to use a solution to detect invalid data entries and perform data transformations that will not require programming or knowledge of SQL.
What should you do?

A. Use Cloud Dataflow with Beam to detect errors and perform transformations.
B. Use Cloud Dataprep with recipes to detect errors and perform transformations.
C. Use Cloud Dataproc with a Hadoop job to detect errors and perform transformations.
D. Use federated tables in BigQuery with queries to detect errors and perform transformations.

Answer: A

NEW QUESTION 318
- (Exam Topic 6)
The marketing team at your organization provides regular updates of a segment of your customer dataset. The marketing team has given you a CSV with 1 million records that must be updated in BigQuery. When you use the UPDATE statement in BigQuery, you receive a quotaExceeded error. What should you do?

A. Reduce the number of records updated each day to stay within the BigQuery UPDATE DML statement limit.
B. Increase the BigQuery UPDATE DML statement limit in the Quota management section of the Google Cloud Platform Console.
C. Split the source CSV file into smaller CSV files in Cloud Storage to reduce the number of BigQuery UPDATE DML statements per BigQuery job.
D. Import the new records from the CSV file into a new BigQuery tabl
E. Create a BigQuery job that merges the new records with the existing records and writes the results to a new BigQuery table.

Answer: A

NEW QUESTION 320
- (Exam Topic 6)
You work for an advertising company, and you've developed a Spark ML model to predict click-through rates at advertisement blocks. You've been developing everything at your on-premises data center, and now your company is migrating to Google Cloud. Your data center will be migrated to BigQuery. You periodically retrain your Spark ML models, so you need to migrate existing training pipelines to Google Cloud. What should you do?

A. Use Cloud ML Engine for training existing Spark ML models
B. Rewrite your models on TensorFlow, and start using Cloud ML Engine
C. Use Cloud Dataproc for training existing Spark ML models, but start reading data directly from BigQuery
D. Spin up a Spark cluster on Compute Engine, and train Spark ML models on the data exported from BigQuery

Answer: A

NEW QUESTION 324

- (Exam Topic 6)
You work for a shipping company that has distribution centers where packages move on delivery lines to route them properly. The company wants to add cameras to the delivery lines to detect and track any visual damage to the packages in transit. You need to create a way to automate the detection of damaged packages and flag them for human review in real time while the packages are in transit. Which solution should you choose?

A. Use BigQuery machine learning to be able to train the model at scale, so you can analyze the packages in batches.
B. Train an AutoML model on your corpus of images, and build an API around that model to integrate with the package tracking applications.
C. Use the Cloud Vision API to detect for damage, and raise an alert through Cloud Function
D. Integrate the package tracking applications with this function.
E. Use TensorFlow to create a model that is trained on your corpus of image
F. Create a Python notebook in Cloud Datalab that uses this model so you can analyze for damaged packages.

Answer: A

NEW QUESTION 329
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