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Exam Professional Data Engineer All Questions

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📄 EXAM PROFESSIONAL DATA ENGINEER TOPIC 1 QUESTION 199 DISCUSSION

Actual exam question from Google's Professional Data Engineer

Question #: 199

Topic #: 1

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You are using BigQuery and Data Studio to design a customer-facing dashboard that displays large quantities of aggregated data. You expect a high volume of concurrent users. You need to optimize the dashboard to provide quick visualizations with minimal latency. What should you do?

- A. Use BigQuery BI Engine with materialized views.
- B. Use BigQuery BI Engine with logical views.
- C. Use BigQuery BI Engine with streaming data.
- D. Use BigQuery BI Engine with authorized views.

Show Suggested Answer

by ducc at Sept. 3, 2022, 4:02 a.m.

Comments

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🗨️ AWSandeep Highly Voted 2 years, 2 months ago

Selected Answer: A

A. Use BigQuery BI Engine with materialized views.

👍 🔄 🚩 upvoted 10 times

🗃️ 👤 **zellick** Highly Voted 👍 1 year, 11 months ago

Selected Answer: A

A is the answer.

<https://cloud.google.com/bigquery/docs/materialized-views-intro>

In BigQuery, materialized views are precomputed views that periodically cache the results of a query for increased performance and efficiency. BigQuery leverages precomputed results from materialized views and whenever possible reads only delta changes from the base tables to compute up-to-date results. Materialized views can be queried directly or can be used by the BigQuery optimizer to process queries to the base tables.

Queries that use materialized views are generally faster and consume fewer resources than queries that retrieve the same data only from the base tables. Materialized views can significantly improve the performance of workloads that have the characteristic of common and repeated queries.

👍 🔄 🚩 upvoted 7 times

🗃️ 👤 **maic01234** Most Recent 🕒 8 months, 2 weeks ago

Option A is the better one.

But keep in mind for real life:

<https://cloud.google.com/bigquery/docs/bi-engine-preferred-tables>

Limitations

BI Engine preferred tables have the following limitations:

You cannot add views into the preferred tables reservation list. BI Engine preferred tables only support tables.

Queries to materialized views are only accelerated if both the materialized views and their base tables are in the preferred tables list.

👍 🔄 🚩 upvoted 1 times

🗃️ 👤 **vamgcp** 1 year, 3 months ago

Selected Answer: A

Materialized views are precomputed query results that are stored in memory, allowing for faster retrieval of aggregated data. When you create a materialized view in BigQuery, it stores the results of a query as a table, and subsequent queries that can leverage this materialized view can be significantly faster compared to computing them on the fly.

👍 🔄 🚩 upvoted 2 times

🗃️ 👤 **sporch08** 1 year, 2 months ago

If we take minimal latency into consideration, I am not sure a materialized view will be the right answer since the user gets data from the cache but is not up to date.

👍 🔄 🚩 upvoted 1 times

🗃️ 👤 **phidelics** 1 year, 4 months ago

Selected Answer: A

periodically cache the results for performance

👍 🔄 🚩 upvoted 1 times

🗃️ 👤 **LPIT** 2 years ago

Selected Answer: A

A.

<https://cloud.google.com/bigquery/docs/materialized-views-intro>

In BigQuery, materialized views are precomputed views that periodically cache the results of a query for increased performance and efficiency

👍 🔄 🚩 upvoted 3 times

🗃️ 👤 **Julionga** 2 years, 1 month ago

Selected Answer: A

I vote A

<https://cloud.google.com/bigquery/docs/bi-engine-intro#:~:text=Materialized%20views%20%2D%20Materialized%20views%20in%20BigQuery%20perform%20precomputation%2C%20thereby%20reducing%20query%20time.%20You%20should%20create%20materialized%20views%20to%20improve%20performance%20and%20to%20reduce%20processed%20data%20by%20using%20aggregations%2C%20filters%2C%20inner%20joins%2C%20and%20unnests.>

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👍 🔄 🚩 upvoted 2 times

🗃️ 👤 **MounicaN** 2 years, 1 month ago

Selected Answer: A

use materialized views is better option here

   upvoted 3 times

  **ducc** 2 years, 2 months ago

Selected Answer: C

By integrating BI Engine with BigQuery streaming, you can perform real-time data analysis over streaming data without sacrificing write speeds or data freshness.

<https://cloud.google.com/bigquery/docs/bi-engine-intro>

   upvoted 1 times

  **ducc** 2 years, 2 months ago

Sorry, A is correct
As AWSandeep mention

   upvoted 2 times



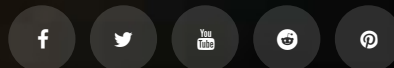
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