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Exam Professional Data Engineer All Questions

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EXAM PROFESSIONAL DATA ENGINEER TOPIC 1 QUESTION 300 DISCUSSION

Actual exam question from Google's Professional Data Engineer
Question #: 300
Topic #: 1
[All Professional Data Engineer Questions]

You currently have transactional data stored on-premises in a PostgreSQL database. To modernize your data environment, you want to run transactional workloads and support analytics needs with a single database. You need to move to Google Cloud without changing database management systems, and minimize cost and complexity. What should you do?

A. Migrate and modernize your database with Cloud Spanner.

B. Migrate your workloads to AlloyDB for PostgreSQL.

C. Migrate to BigQuery to optimize analytics.

D. Migrate your PostgreSQL database to Cloud SQL for PostgreSQL.

Show Suggested Answer

by scaenruy at *Jan. 4, 2024, 12:51 p.m.*

Comments

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8ad5266 Highly Voted 10 months, 1 week ago

Selected Answer: D

Minimize cost. https://cloud.google.com/alloydb?hl=en

AlloyDB offers superior performance, 4x faster than standard PostgreSQL for transactional workloads. That does not come without cost.

upvoted 5 times

duers Most Recent 2 weeks, 6 days ago

Selected Answer: D

AlloyDB for PostgreSQL is a fully managed, PostgreSQL-compatible database service offered by Google Cloud. It's designed for high-performance transactional and analytical workloads and offers performance and scalability benefits over standard PostgreSQL. While it meets the requirement of not changing the database system in a broad sense (as it's PostgreSQL-compatible), it's a different service than standard PostgreSQL and might introduce a level of complexity and cost beyond simply migrating to Cloud SQL for PostgreSQL.

upvoted 1 times

aaaaaaaasdasdasfs 3 weeks ago

Selected Answer: B

The correct answer is B. Migrate your workloads to AlloyDB for PostgreSQL.
Here's why:
Your requirements are:

Run both transactional and analytics workloads in a single database
Stay with PostgreSQL (don't change database systems)
Minimize cost and complexity

AlloyDB for PostgreSQL is specifically designed for this scenario - it's fully PostgreSQL-compatible but optimized for both transactional and analytical workloads. It offers:

PostgreSQL compatibility (minimizing migration complexity)
Enhanced analytics capabilities with column store indexes
Better performance for mixed workloads

upvoted 1 times

rajshiv 3 weeks, 1 day ago

Selected Answer: D

While B looks good too but It’s more expensive than Cloud SQL and better suited when you need advanced analytics and heavy transactional performance. I think it is an Overkill if you're looking to minimize cost/complexity which the question states.

upvoted 1 times

mednoun 2 months, 3 weeks ago

Selected Answer: B

The question specifies that the analytical needs need to reside in a single database. This can't be done using Cloud SQL. The database that supports all of that is AlloyDB that's why I will go with the B answer.

upvoted 2 times

plum21 3 months ago

Selected Answer: B

"support analytics needs" -> columnar storage -> AlloyDB

upvoted 2 times

juliorevk 3 months, 1 week ago

Selected Answer: D

Cloud SQL natively supports PostgreSQL
AlloyDB for PostgreSQL is a great option if you're specifically looking for high performance in both transactional and analytical workloads. However, it might be more complex and costly than Cloud SQL

upvoted 1 times

joelcaro 4 months, 2 weeks ago

Selected Answer: B

B
AlloyDB es la mejor opción para modernizar el entorno, mantener compatibilidad con PostgreSQL y manejar tanto cargas transaccionales como analíticas en un único sistema, minimizando costos y complejidad.

upvoted 3 times

baimus 6 months, 4 weeks ago

Selected Answer: B

In real life clearly how performant it needed to be would be a massive factor. AlloyDB is more expensive (see https://cloud.google.com/alloydb/pricing, vs https://cloud.google.com/sql/pricing), but when they say "minimise cost" is that

per query, or is it per year assuming similar instance size. There's no way for us to know, we have to guess. I'm guessing AlloyDB, as the question seem to be telegraphing that, but it could just as easily be CloudSQL postgres based on the cheaper costs. We simply cannot know.

upvoted 3 times

Antmal 9 months, 3 weeks ago

Selected Answer: B

Because AlloyDB is optimised for hybrid transactional and analytical processing (HTAP), meaning you can run both transactional workloads and analytics on the same database with excellent performance.

upvoted 4 times

Anudeep58 9 months, 4 weeks ago

Selected Answer: B

AlloyDB

upvoted 2 times

finixd 10 months, 2 weeks ago

Selected Answer: B

It's a little complicated, considering it says minimize costs (Cloud SQL) and run transactional workloads and support analytics needs (AlloyDB). I consider B. because you can minimize costs in the long-term instead of doing it immediately with possible extra costs in the long-term. Think about it

upvoted 2 times

extraego 10 months, 4 weeks ago

Selected Answer: D

AlloyDB is for large scale and more expensive. We want to minimize cost and complexity, so the answer is D.

upvoted 3 times

virat_kohli 11 months, 1 week ago

Selected Answer: B

B. Migrate your workloads to AlloyDB for PostgreSQL.

upvoted 2 times

virat_kohli 11 months, 1 week ago

Sorry its D. Migrate your PostgreSQL database to Cloud SQL for PostgreSQL.

upvoted 2 times

omkarr24 1 year, 1 month ago

Selected Answer: D

They currently have transactional data stored on-premises in a PostgreSQL database and they want to modernize their database that supports transactional workloads and analytics .If they select cloud Sql (postgreSQL) it will minimize the cost and complexity.
and for analytics purpose they can create federated queries over cloudSql(postgreSql)
https://cloud.google.com/bigquery/docs/federated-queries-intro
This approach will minimze the cost

upvoted 4 times

Izzyt99 1 year, 1 month ago

Selected Answer: B

B - minimize cost

Cloud SQL for PostgreSQL: Generally less expensive than AlloyDB, especially for smaller deployments.
AlloyDB: Can be significantly more expensive due to its advanced features and high performance capabilities.

upvoted 1 times

MissK1371 1 year ago

so answer D?

upvoted 2 times

MaxNRG 1 year, 2 months ago

Selected Answer: D

minimize cost and complexity

upvoted 4 times

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