EXAM PROFESSIONAL DATA ENGINEER TOPIC 1 QUESTION 188 DISCUSSION

Actual exam question from Google's Professional Data Engineer
Question #: 188
Topic #: 1
[All Professional Data Engineer Questions]

Your startup has a web application that currently serves customers out of a single region in Asia. You are targeting funding that will allow your startup to serve customers globally. Your current goal is to optimize for cost, and your post-funding goal is to optimize for global presence and performance. You must use a native
JDBC driver. What should you do?

A. Use Cloud Spanner to configure a single region instance initially, and then configure multi-region Cloud Spanner instances after securing funding.

B. Use a Cloud SQL for PostgreSQL highly available instance first, and Bigtable with US, Europe, and Asia replication after securing funding.

C. Use a Cloud SQL for PostgreSQL zonal instance first, and Bigtable with US, Europe, and Asia after securing funding.

D. Use a Cloud SQL for PostgreSQL zonal instance first, and Cloud SQL for PostgreSQL with highly available configuration after securing funding.

Show Suggested Answer

by AWSandeep at *Sept. 2, 2022, 11:06 p.m.*

Comments

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AWSandeep Highly Voted 2 years, 8 months ago

Selected Answer: A

A. Use Cloud Spanner to configure a single region instance initially, and then configure multi-region Cloud Spanner instances after securing funding.

When you create a Cloud Spanner instance, you must configure it as either regional (that is, all the resources are contained within a single Google Cloud region) or multi-region (that is, the resources span more than one region).

You can change the instance configuration to multi-regional (or global) at anytime.

upvoted 11 times

izekc Highly Voted 2 years ago

Selected Answer: D

Although A is good, but concerning about the cost. Then D will be much more suitable

upvoted 9 times

SamuelTsch Most Recent 6 months, 1 week ago

Selected Answer: D

I go to D. Cloud SQL is usually used for web application (CRM) (https://cloud.google.com/blog/topics/developers-practitioners/your-google-cloud-database-options-explained?hl=en)

upvoted 1 times

4a8ffd7 7 months, 2 weeks ago

Selected Answer: D

Although A is good, but concerning about the cost. Then D will be much more suitable

upvoted 1 times

CGS22 1 year, 1 month ago

Selected Answer: D

Although A is good, but concerning about the cost. Then D will be much more suitable

upvoted 1 times

Ronn27 4 months ago

While a zonal instance is cost-effective, transitioning to a highly available Cloud SQL instance does not support global replication. Cloud SQL lacks the scalability and global presence needed for your post-funding goals.

So I beleive Spanner is the right answer

upvoted 2 times

tibuenoc 1 year, 3 months ago

Selected Answer: D

I think is D

The best for Web app is Cloud SQL, and Spanner is the best for data more than 30GB

upvoted 1 times

Ronn27 4 months ago

While a zonal instance is cost-effective, transitioning to a highly available Cloud SQL instance does not support global replication. Cloud SQL lacks the scalability and global presence needed for your post-funding goals.

upvoted 1 times

MaxNRG 1 year, 4 months ago

Selected Answer: A

A - This option allows for optimization for cost initially with a single region Cloud Spanner instance, and then optimization for global presence and performance after funding with multi-region instances.
Cloud Spanner supports native JDBC drivers and is horizontally scalable, providing very high performance. A single region instance minimizes costs initially. After funding, multi-region instances can provide lower latency and high availability globally. Cloud SQL does not scale as well and has higher costs for multiple high availability regions. Bigtable does not support JDBC drivers natively. Therefore, Spanner is the best choice here for optimizing both for cost initially and then performance and availability globally post-funding.

upvoted 6 times

lucaluca1982 2 years, 1 month ago

Spanner has some limitations with JDBC. Maybe the quetion wants to help us tp choose Cloud SQL

upvoted 3 times

musumusu 2 years, 2 months ago

Answer D:
Cost effective transactional database Cloud SQL. Spanner is good case for data more than 30 GB

upvoted 1 times

odacir 2 years, 4 months ago

Selected Answer: A

B and C has no sense because of the driver.
D looks like a good option, but HA it's not to improve performance or global presence:
The purpose of an HA configuration is to reduce downtime when a zone or instance becomes unavailable. This might happen during a zonal outage, or when an instance runs out of memory. With HA, your data continues to be available to client applications.
So the best option is A.

upvoted 7 times

TNT87 2 years, 7 months ago

Selected Answer: A

https://cloud.google.com/spanner/docs/jdbc-drivers
Ans A
https://cloud.google.com/spanner/docs/instance-configurations#tradeoffs_regional_versus_multi-region_configurations
The last part of the question makes it easy

upvoted 5 times

TNT87 2 years, 7 months ago

Yes Spanner is expensive , but the question expresslty states that "after securing funding you want to have a global presence" the word globally is repeatedly stated there.
Answer is A.

upvoted 3 times

TNT87 2 years, 7 months ago

https://cloud.google.com/spanner/docs/instance-configurations#tradeoffs_regional_versus_multi-region_configurations
Ans A

upvoted 1 times

badrisrinivas9 2 years, 7 months ago

Selected Answer: D

Spanner is expensive, they haven't mentioned the size of db... optimize for cost then option is Cloud SQL which cost effective and highly available in case of multi region.

upvoted 3 times

Quevedo 2 years, 7 months ago

Selected Answer: A

A is the best option. It is globally scalable and it also meets the cost goal as it says that initially it will be configurated as single region wich is cheaper than multi region.

upvoted 3 times

YorelNation 2 years, 8 months ago

Selected Answer: D

Spanner is expensive can't be A

Would choose D

upvoted 2 times

YorelNation 2 years, 8 months ago

Actually maybe C as you don't really need relational database for a webapp and BigTable is super performant and highly available

upvoted 1 times

TNT87 2 years, 7 months ago

no its A

upvoted 1 times

TNT87 2 years, 7 months ago

The fact that its global cloud spanner is the answer. Secondly Option D, the fact that it has to be highly avaible and multi regional its already more expensive than Cloud spanner Regional instance.
https://cloud.google.com/spanner/docs/instance-configurations#tradeoffs_regional_versus_multi-region_configurations

upvoted 2 times

ducc 2 years, 8 months ago

Selected Answer: A

Spanner still support JDBC
https://cloud.google.com/spanner/docs/jdbc-drivers

upvoted 3 times