01 GCP Spanner Questions -KirkYagami 

1.

You are designing storage for two relational tables that are part of a 10-TB database on Google Cloud. You want to support transactions that scale horizontally.
You also want to optimize data for range queries on non-key columns. What should you do?

A. Use Cloud SQL for storage. Add secondary indexes to support query patterns.

B. Use Cloud SQL for storage. Use Cloud Dataflow to transform data to support query patterns.

C. Use Cloud Spanner for storage. Add secondary indexes to support query patterns.

D. Use Cloud Spanner for storage. Use Cloud Dataflow to transform data to support query patterns.

Answer: C

Explanation:

Spanner allows transaction tables to scale horizontally and secondary indexes for range queries

2

Your United States-based company has created an application for assessing and responding to user actions. The primary table's data volume grows by 250,000 records per second. Many third parties use your application's APIs to build the functionality into their own frontend applications. Your application's APIs should comply with the following requirements:
- Single global endpoint
- ANSI SQL support
- Consistent access to the most up-to-date data

What should you do?

A. Implement BigQuery with no region selected for storage or processing.

B. Implement Cloud Spanner with the leader in North America and read-only replicas in Asia and Europe.

C. Implement Cloud SQL for PostgreSQL with the master in North America and read replicas in Asia and Europe.

D. Implement Bigtable with the primary cluster in North America and secondary clusters in Asia and Europe.

3

You need to create a new transaction table in Cloud Spanner that stores product sales data. You are deciding what to use as a primary key. From a performance perspective, which strategy should you choose?

A. The current epoch time

B. A concatenation of the product name and the current epoch time

C. A random universally unique identifier number (version 4 UUID)

D. The original order identification number from the sales system, which is a monotonically increasing integer

Explanation:

According to the documentation:

Use a Universally Unique Identifier (UUID)

You can use a Universally Unique Identifier (UUID) as defined by RFC 4122 as the primary key. Version 4 UUID is recommended, because it uses random values in the bit sequence. Version 1 UUID stores the timestamp in the high order bits and is not recommended.

Reference:

https://cloud.google.com/spanner/docs/schema-design

4

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.

Answer: A

Explanation:

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.