Google Cloud Computing Foundation Course
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Lecture-31
Cloud Spanner as a Managed Service

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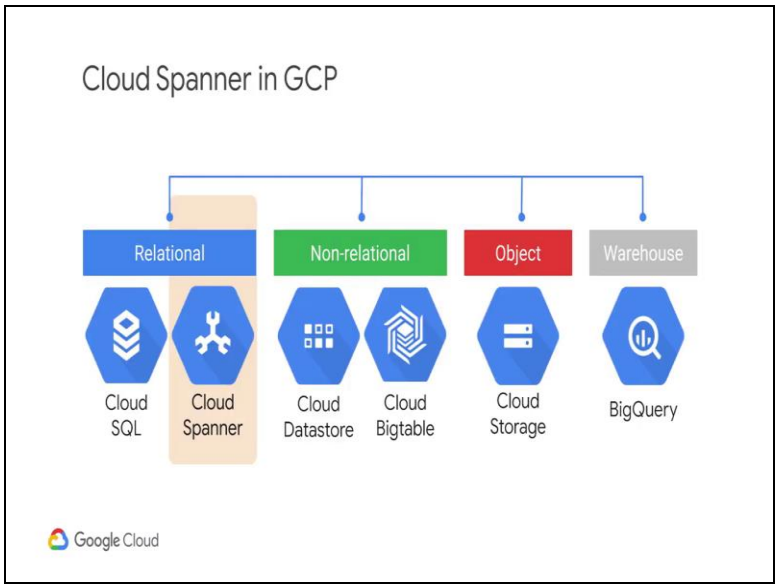

In this topic you explore how clouds spanner as a managed service. As per cloud sequel spanner is line through relational database requirements. The key difference is that clouds spanner combines the benefits of relational database structure with non relational horizontal scale. Vertical scaling is very unique and is a single instance is larger or smaller. Horizontal scaling when scale by adding and removing servers.

What makes clouds spanner unique is relational database that scales horizontally. Cloud spanner user often advertising finance and marketing technology Industries with the need exist to manage end user metadata.

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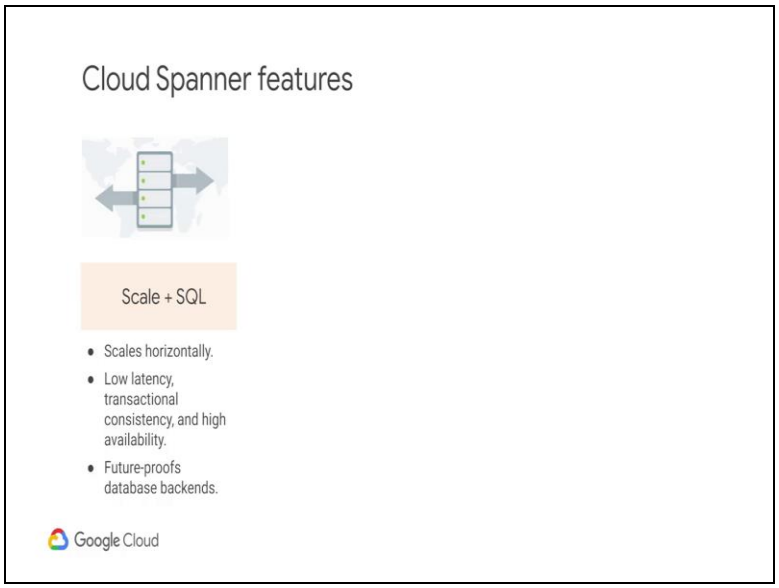

Most databases today require making tradeoff between scale and consistencies. With cloud spanner you get best of relational database structure and non relational database scale on performance with strong external consistency across roads, regions and continents. This means that cloud spanner can scale to very large database sizes while still giving IT and developers the familiarity they use to with other relational databases such as My-Sequel, Postgres sequel or proprietary databases. The cloud spanner is strongly consistent. Data added or updated from any location is immediately available regardless of the location from it is accessed.

Cloud spanner also dramatically reduces the operational overhead needed to keep the database online and serving traffic. Users often move to clouds spanner from Share-It my sequel deployment and expensive proprietary solutions.

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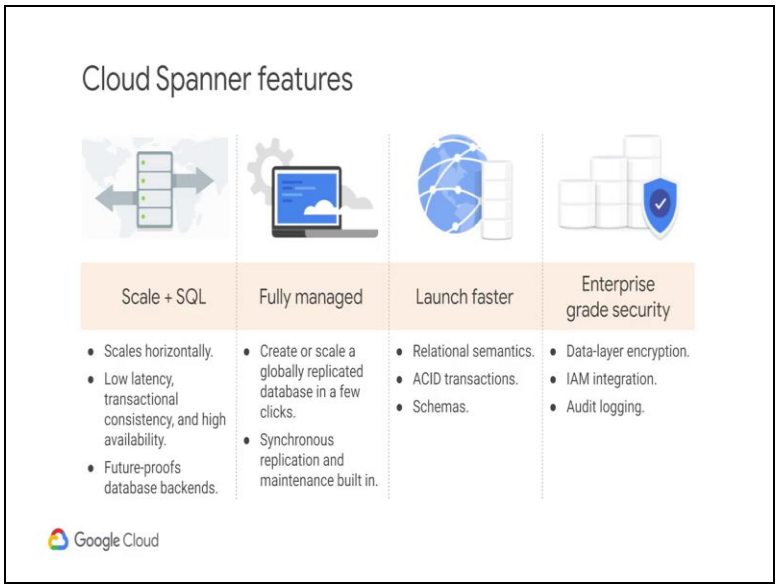

Cloud spanner scale horizontally and serves data with no latency while maintaining transaction consistency and industry leading 5 times the availability. But it is less than five minutes down time for year. Cloud spanner can scale to arbitrary large database sizes to help avoid rewrite and migrations. The use of multiple databases or shared databases as an alternative solution introduces unnecessary complexity and cost.

Cloud spanner allows you to create or scale of globally replicated database from mission critical apps through a hand full of clicks. Continuous replication and maintenance are also automatic and built in. Cloud spanner is relational database with full relational semantics acid transactions and as online scheme changes as an online operation with no planned down time. You can reuse existing sequels to query data in cloud spanner using familiar industry standard ANSI 2011 sequel.

Enterprise grade security includes data level encryption by default in transit and addressed granular identity and access management and audit logging.

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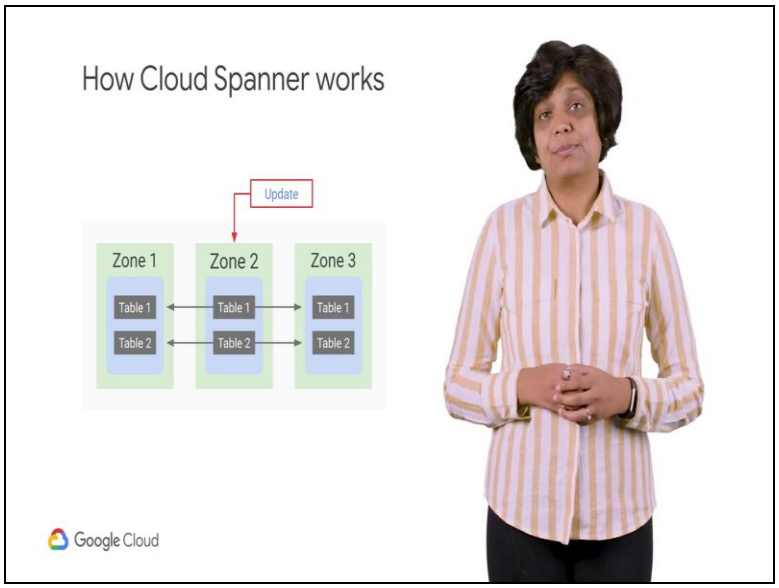

So how does cloud spanner work when data is automatically and instantly copied across regions. This is called synchronous replication as a result query is always return, consistent and ordered answers regardless of the region. Google uses replication within and across regions to achieve availability. So, if one region goes offline your data can still be served from another region.