Spanner: Becoming a SQL System

Summary

Spanner is produced by Google. It is a globally distributed data management system, meaning that it provides an abstraction that lets you query distributed data like it is all on one machine. Spanner scales very well. Spanner was developed because of the limitations of a key-value store. Spanner is distinct because it allow allows the user to make transactions in a system were the data is stored on different machines. I think this is a helpful sentence from the paper: "A database is horizontally row-range sharded"

Spanner exposes two different type of APIs. One is for making queries and the other is for reading queries. Spanner uses location hints to map queries to the correct machines.

It uses a filter tree to track to make range row look up faster. This data structure is maintained during run time. The following are ways that Spanner handles failures. The system hides all transient failures. A transient failure is one that would complete if the action was simply tried again. This means that the developer writing a program with this call would not have to make a retry loop. This is particule good because writing a good retry loop is particularly challaging. This is because it is hard to make it with the correct back-off.

Spanner is able to be upgraded even if all of the machines running spanner do not upgrade. In this way new changes are always able to be made.

Pros

- I thought that the paper did a good job of addressing how a developer might use the system.

Cons

Further Developed

Other Comments