Summary of “Bigtable: A Distributed Storage System for Structured Data”

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In the article “Bigtable: A Distributed Storage System for Structured Data”, authors introduced a system called “Bigtable”, which is designed to store structured data of a very large scale and have a flexible control on these data. Not like the GFS and MapReduce as what we read before, several features of Bigtable rely on the other infrastructures like GFS, the SStable, the Chubby service. Those infrastructures are both highly-reliable and distributed, which also means that they make sure the control and storage function is reliable. On the other hand, there is also one similar point between Bigtable and GFS. The Bigtable has the architecture of master server and slave server for physical data storage, which is also called tablet server. However, the master server will take care of physical maintenance of Bigtable and some other essential matters but not all of them. And the Chubby service will have a more logical control on the system. Things such as locating a tablet and lock service will get Chubby involved. These two infrastructures also join their hands and make the Bigtable even more reliable.

After reading this article, I find the data model of the Bigtable is rather special. It took me a while to fully understand how it works. But after that, I believe this model is very useful for structured data. There are also some expressions which are very similar to those related to relational database. But they are not exactly the same. And those are what often make me confusing