Summary for “Managing Update Conflicts in Bayou, a Weakly Connected Replicated Storage System”

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In the article of this week, authors introduced a storage system “Bayou” which is especially designed for mobile computation environment with probability of unstable network. The basic operation for client-server RPC is Read and Write. On the other hand, to achieve week and eventual consistency, Bayou manages update with different strategy compared with system like Coda. There are many features which are introduced in this article. For example, Bayou gets application to aware of conflict and involved in conflict detection and resolution so that it can get advantage of semantics of the data. In this sense, it can get a better performance in detection and resolution. Another characteristic for Bayou, which seems quite important to me, is its tentative state of data. As what is illustrated in the article, conflicts caused by all kinds of reasons will cause data to become tentative. System will have to eventually resolve the conflict according to what is programmed during the anti-entropy process. Meanwhile, there is also some measurement to give as much consistent as it possible to achieve internally. And most of features are deployed and generalized because of this characteristic.

Overall, this article introduced many features and the decisions authors have made around it. The goal of Bayou is quite obvious and clear as well as most of the illustration for features, while some descriptions of the functions or features are still looks confusing to me.