

Paper: Everything You Always Wanted to Know About Synchronization but Were Afraid to Ask

This paper is about synchronization. In most cases, when scalability issues are faced, it is not clear if they are due to the underlying hardware, to the synchronization algorithm itself, to its usage of specific atomic operations, to the application context, or to the workload. This paper shows the cost of synchronization and studies its scalability along different directions. Therefore, the result of this paper can be used in various way not only for the synchronization study, but also for several techniques that uses synchronization. However, it only covers standard synchronization schemes that the researchers thought so some techniques like lock-free can not use this study.