

Paper: An Analysis of Linux Scalability to Many Cores

This paper shows whether traditional kernel designs can be used and let applications to scale in multicore systems. To evaluate the scalability of operating system, this paper introduces MOSBENCH, and using MOSBENCH, they found three broad kinds of scalability problems and fixed them with sloppy counters that is used to augment shared counters to make some uses more scalable without having to change all uses of the shared counter. This paper shows that to improve the performance of applications in multicore system, the kernel also needs to be modified that can harm the performance and this paper solved the problem with sloppy counters. By MOSBENCH researchers can easily reveal how scalability the operating system is and can use it at their own research.