

Paper: FlashFQ: A Fair Queueing I/O Scheduler for Flash-Based SSDs

This paper introduces FlashFQ which is a new operating system I/O scheduler that achieves fairness and high responsiveness at the same time. In a concurrent system, many resource principals simultaneously compete for a shared I/O resource and the scheduler should regulate I/O in such a way that accesses are fair. FlashFQ enhances the classic fair queueing approach (start-time fair queueing schedulers) with throttled dispatch to exploit restricted Flash I/O parallelism without losing fairness.