

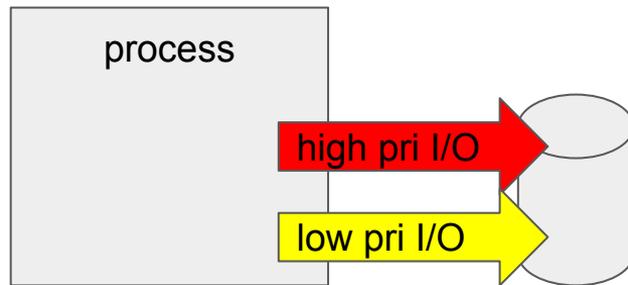
my research areas

- linux kernel work.
- distributed coordination: fault tolerant, scalable metadata management.
- data centric networking: reliable and secure data exchange over periodically connected store and forward links.

block scheduling in the kernel

even with flash there we have a finite bandwidth to storage, so if we want fast stable storage, we have to schedule things.

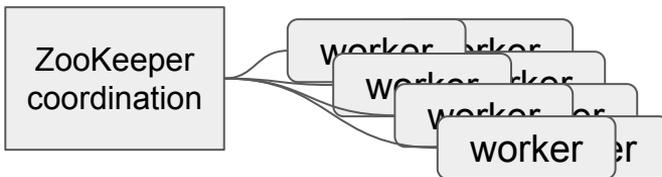
- `ionice` allows use to prioritize storage ops for a process
- some processes, such as those with write-ahead-logs (AKA databases) do mixed priority writes.
- we want stable bandwidth for write-ahead-logs at the expense of bandwidth for other writes.



distributed computing

there are many bite size projects in the ZooKeeper project that offers the chance to get experience with distributed systems.

- performance tracking. i have a 6 server 60 pi system to do benchmarking on. community would love this!
- witnesses for doing 2 server majorities.
- zookeeper ensemble split and merge..



disconnected data distribution

how do you connect to the data on the internet if they don't have an internet connection? look at a special case of Delay Tolerant Networking (DTN): users have access to traveling storage that has periodic access to the internet.

- build the traveling storage with raspberry pis.
- integrate with a mobile app such as mail, messaging, or podcast.
- workout security models for privacy and authenticity.

