Lecture 23: Sockets & Naming, Demo & Quiz

- Sockets
- Demos (next time)
  - Wireshark
  - Ports (services, netstat)
  - traceroute
  - telnet & HTTP
- (Time permitting) DNS (next time)
- Quiz
Disk seek

slope: seek speed = time it takes to read/write (also rotational latency)

assume long seeks are faster

C-Scan
C-Look
SSRF
IP Fragmentation

 DST addr: 1.2.3.4
 Total length: 1000
 Offset: 0

 add data

 eth hdr

 (IP data)

 DST: 1.2.3.4
 tot. len: 1000
 offset: 0

 DST: 1.2.3.4
 tot. len: 1000
 offset: 500
Take a look @ FS impl (linked on Razza):
- structs correspond to different components
  (in types.h & blockstore.c): block, segment, blockaddr, superblock, disk...
- find+touch (blockstore.c): algorithm for finding
  inodes & data blocks, putting them in nextSeg.
- initialize + sync: used mmap to make in-memory
  data structures exactly match data structures
  in file (no need to worry about cache
  management, etc: VM for OS handles it for
  me).
- sync: used mprotect to set up (memory)
  segmentation; OS will give me segment fault
  if I write to disk outside of next segment.

Using VM system to my advantage:

Disk is 64 GB, but still fast because I'm not using most of it.