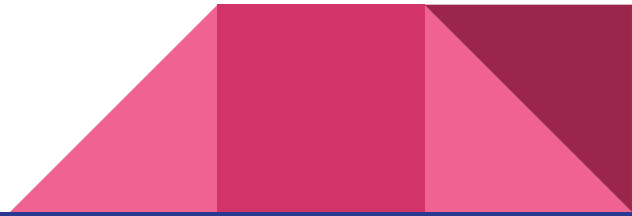
NunyaOS

Week 11

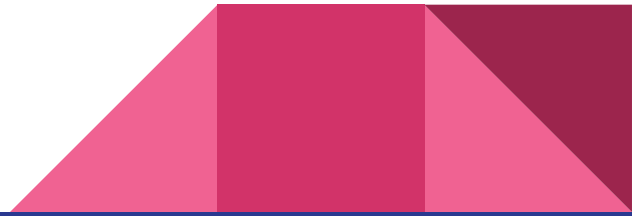
Updates

- run() syscall hotly debated last Friday
  - About to be merged in its final form - Handling merge conflicts, bug
  - Concept of permission templates, identifiers introduced
  - Was blocking on other fronts
- Window and FS first set of syscalls merged - Hesitant with run()
- File reorganization on all fronts
- Add clock/RTC syscalls
- Open Files Table



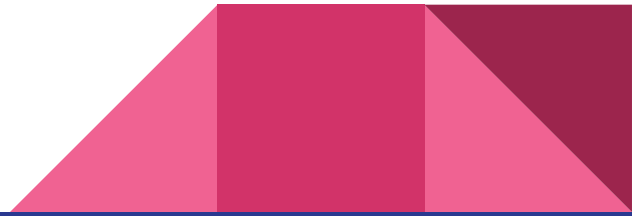
run() syscall

- One syscall that does everything to start child
- Takes a descriptor for a kernel-managed permissions template
- Copies template into permissions struct for process
- Permissions for each module:
  - Memory: a number of allowed pages
  - Fs: a list of directories/files that are allowed
  - Window: { max_width, max_height, origin (offset_x, offset_y) }
- Accurate memory tracking throughout



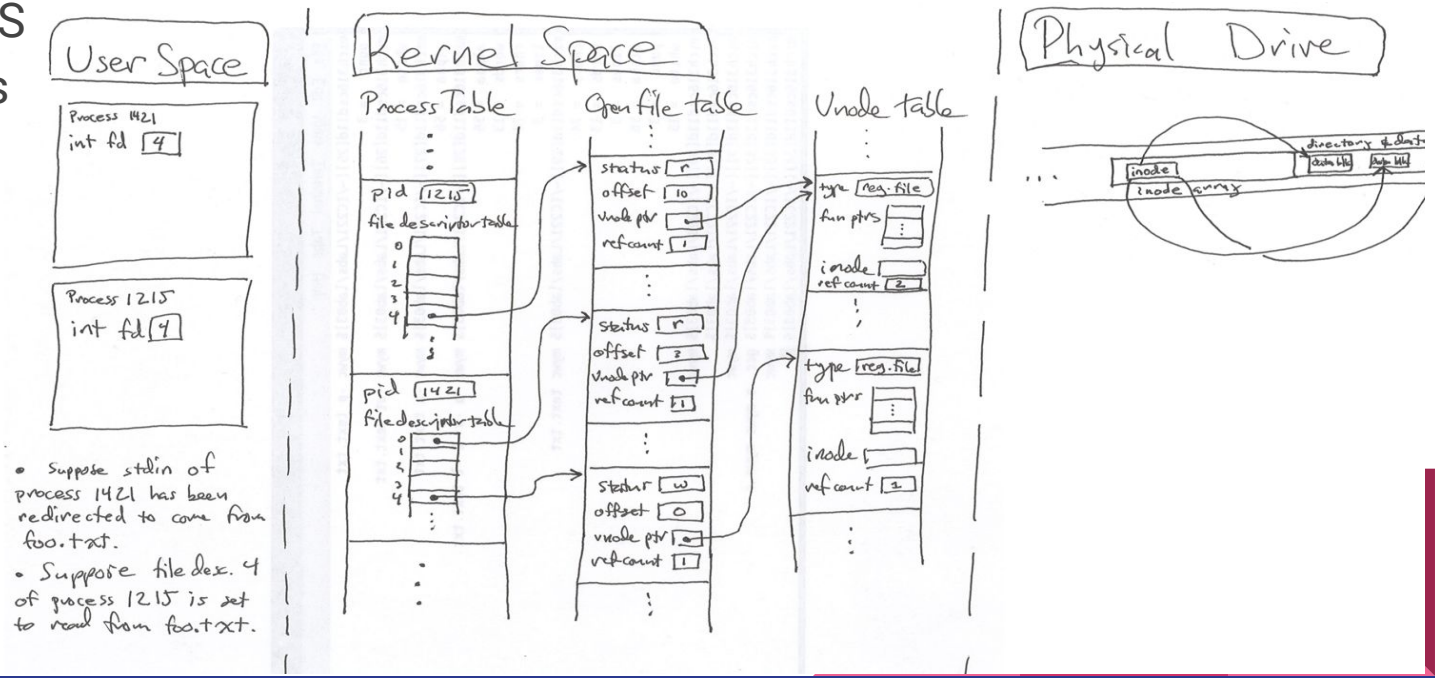
FS Syscalls

- First PR is in
  - File structure of code correct
  - No process struct conflicts
  - Security stripped out (process previously voluntarily enforced on itself, not children)
- Ryan working to make syscalls for manipulating permissions templates
- Jesse puts up PR for OS-wide file table



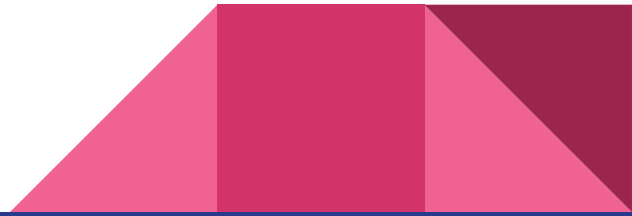
Open Files Table

- Current max 1024 open files in OS
- Max of 64 files per process



Window/RTC/clock Syscalls

- Window creation, deletion, drawing lines and text
  - In the proper file structure
  - Security was waiting on run() to see how to make interface
- Sleep, clock_read, rtc_read
  - Needed for animating things!
- Event distribution going up for review
  - Was dependent on basic system calls



Future Plan

- Finish OS open file table
- Manipulate permissions templates from user land
- Study/correct behavior of children from run() calls
    - Create more user-level programs to test further
    - User-level terminal
- Solve windowing pre-emption bug

Questions

- If a process dies, should its children go with it?
  - If so, should a parent be able to ask its child for its status?
    - If so, how?
- pagetable_getmap issues with multiple process creation