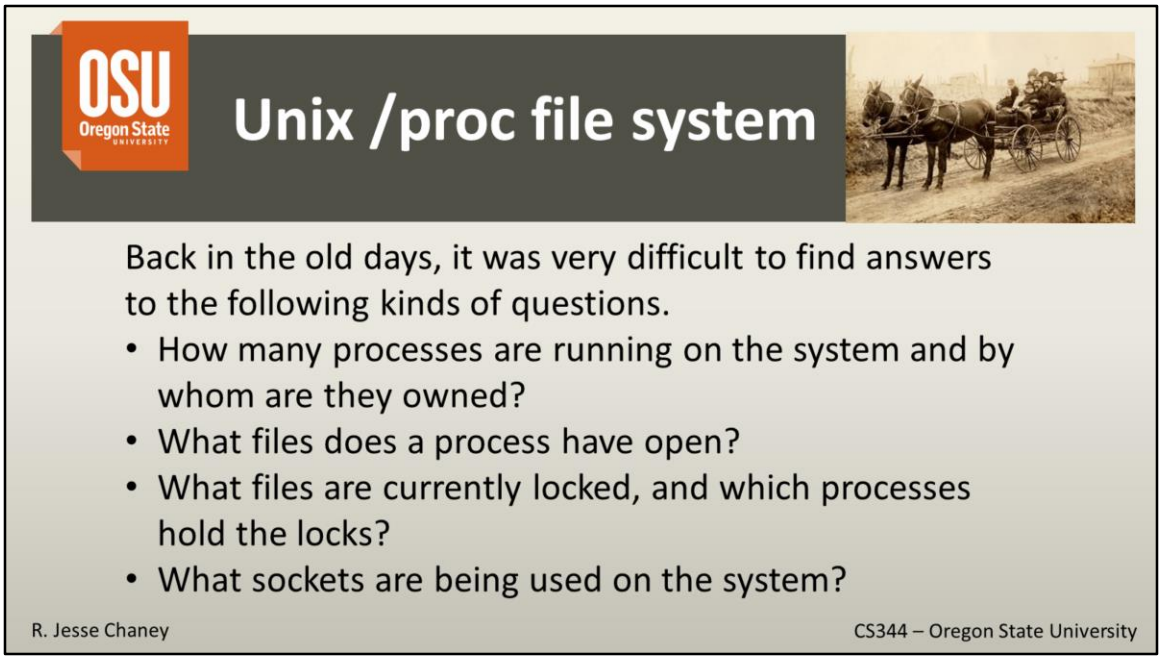
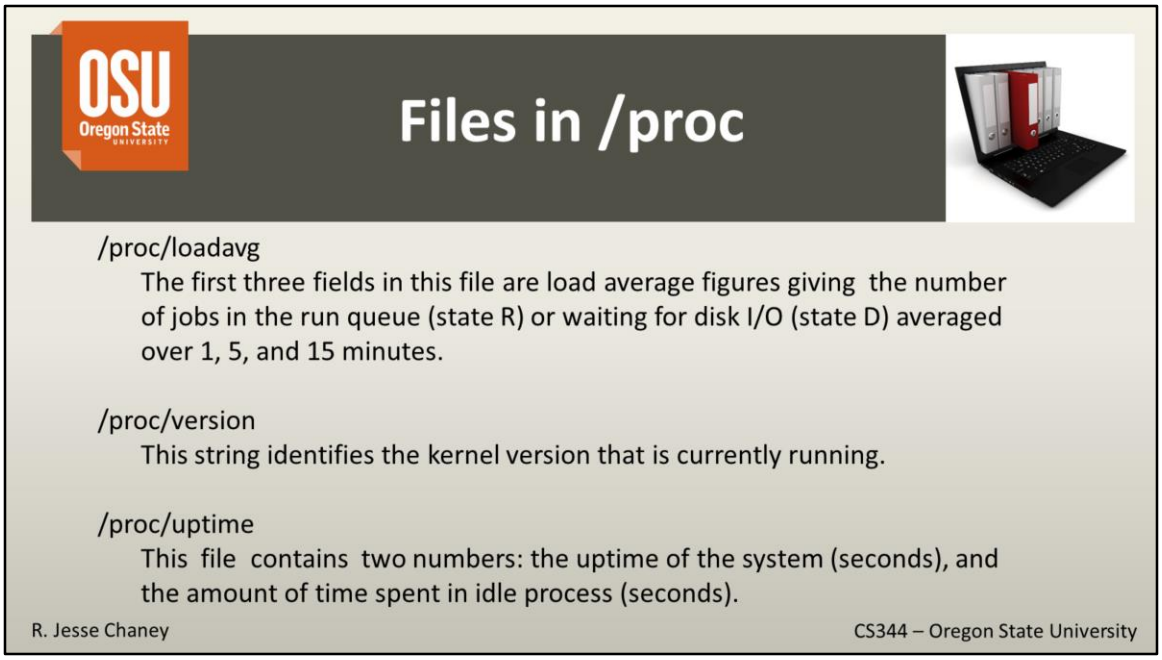


You could open a file called /dev/kmem or /dev/mem and get some symbols out of there, but the symbols and locations varied from vendor to vendor.

The /proc virtual file system is a lot easier to use.

The /proc file system is said to be virtual because the files and subdirectories that it contains don't reside on a disk. Instead, the kernel creates them "on the fly" as processes access them.

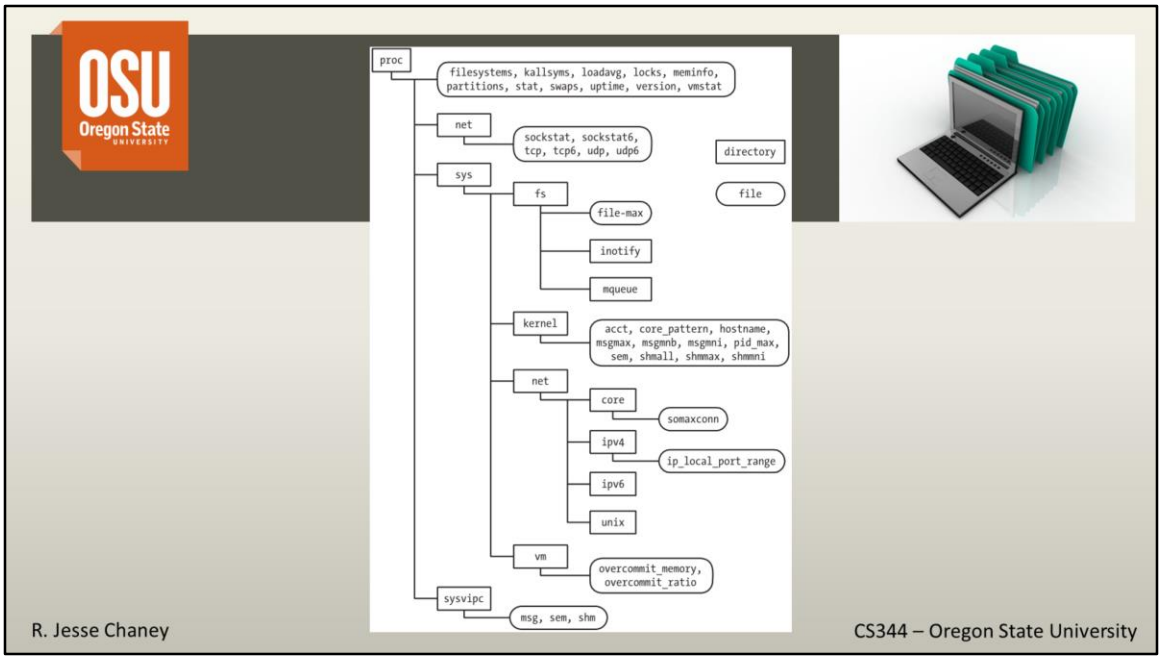


There are so many files and directories in the /proc file system that I cannot cover a fraction of them. You can look at the man page for proc to see what they are. I'll mention just a couple here.

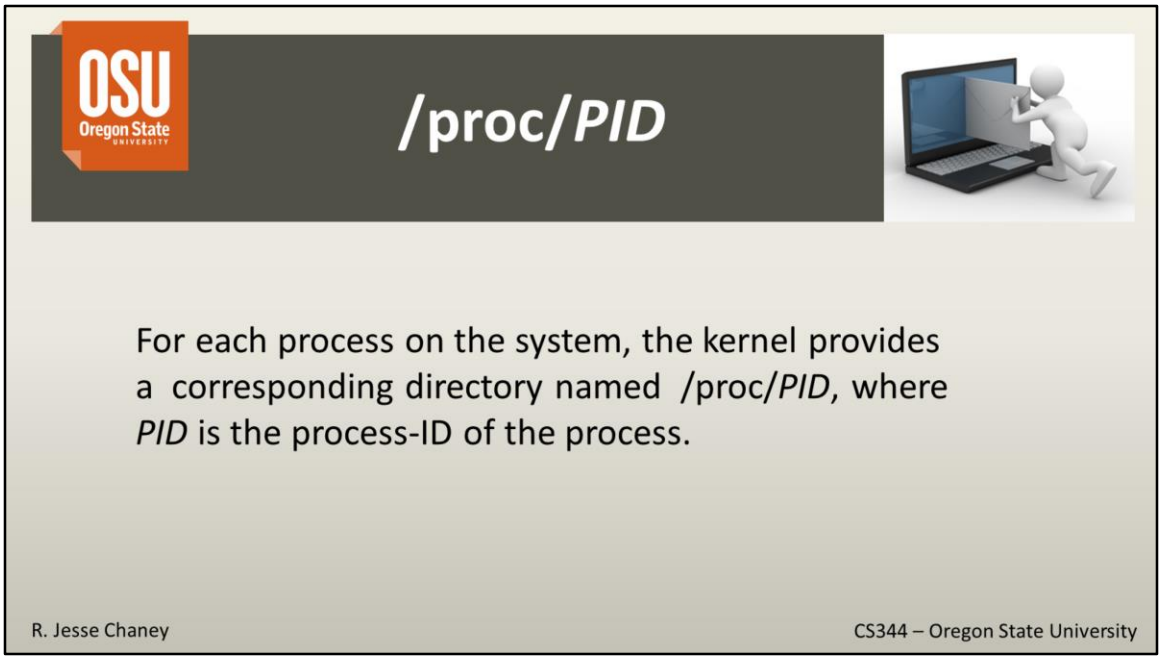
loadavg: They are the same as the load average numbers given by uptime(1) and other programs. The fourth field consists of two numbers separated by a slash (/). The first of these is the number of currently executing kernel scheduling entities (processes, threads); this will be less than or equal to the number of CPUs. The value after the slash is the number of kernel scheduling entities that currently exist on the system. The fifth field is the PID of the process that was most recently created on the system.

version:

uptime:



As you can see, there are a LOT of files and directories.



Within this directory are various files and subdirectories containing information about that process.

/proc/*PID*

File	Description (process attribute)
`cmdline`	Command-line arguments delimited by `\0`
`cwd`	Symbolic link to current working directory
`environ`	Environment list *NAME=value* pairs, delimited by `\0`
`exe`	Symbolic link to file being executed
`fd`	Directory containing symbolic links to files opened by this process
`maps`	Memory mappings
`mem`	Process virtual memory (must *lseek()* to valid offset before I/O)
`mounts`	Mount points for this process
`root`	Symbolic link to root directory
`status`	Various information (e.g., process IDs, credentials, memory usage, signals)
`task`	Contains one subdirectory for each thread in process (Linux 2.6)

A few of the files inside the /prod/PID directory. We are going to look at the status file in a bit more detail.