



Kernel Setup



Modifying the Kernel

- .Previously, we dynamically inserted kernel modules into the running kernel
- .Now, we need to add new system calls
- .System calls are part of the kernel itself
 - Adding new system calls requires recompiling the entire kernel

Kernel Versions

.Your machine should be running kernel version 4.15.0-45-generic

- Verify using ``uname -r``

.We will be downloading, modifying, and installing kernel version 4.19.98

- This will automatically update our kernel version
- When there are two kernels on a machine, the machine typically automatically boots into the latest version

Download

- .Download the new kernel from
<https://www.kernel.org/pub/linux/kernel/v4.x/linux-4.19.98.tar.xz>
- .Can visit the link in a web browser or download via wget
- .Extract the tar file:
 - > `tar -xvf /path/to/tar -C /usr/src`
(-C tells tar where to extract the files)

Symlink

.If you don't want to work in /usr/src, you can setup a symlink to the kernel source directory

```
> ln -s /usr/src/linux-4.19.98 ~/test_kernel
```