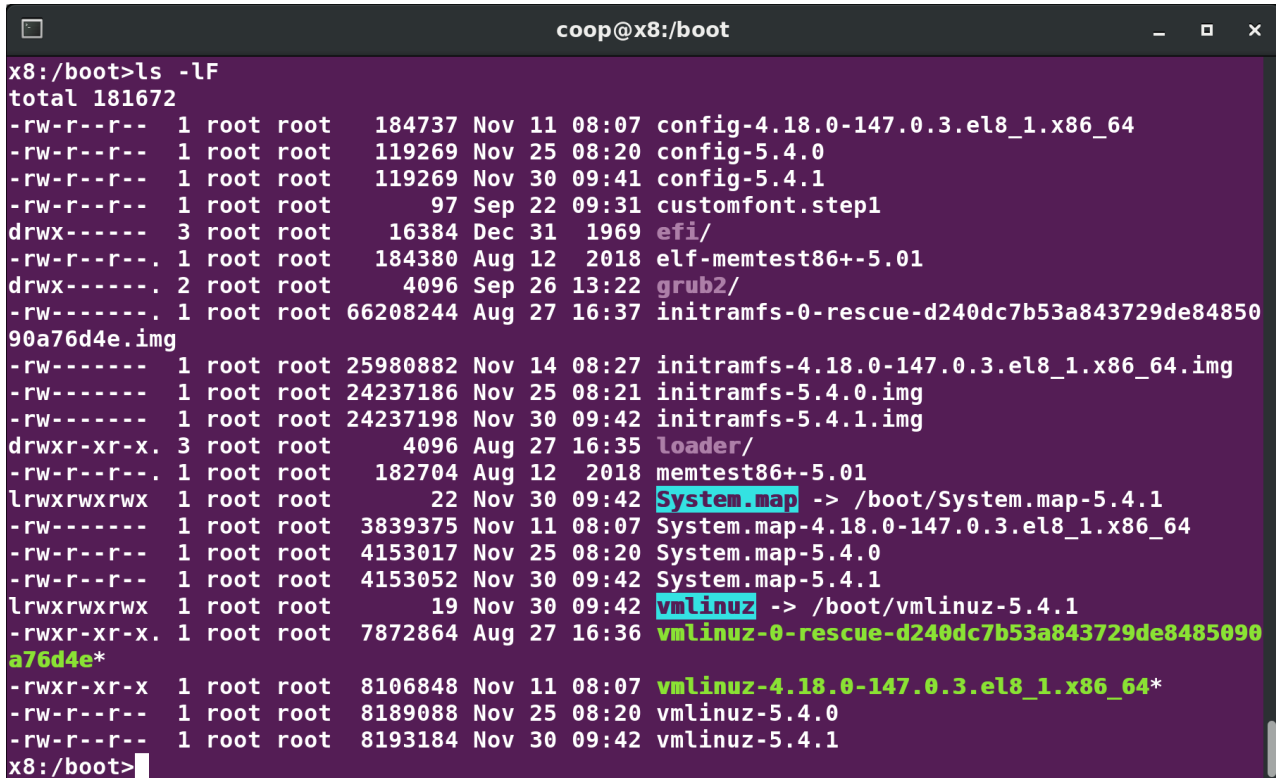


/boot Directory

coursera.org/learn/linux-for-developers/supplement/wn25A/boot-directory

A **/boot** directory might look like the one in the screenshot below:



```
x8:/boot>ls -lF
total 181672
-rw-r--r-- 1 root root 184737 Nov 11 08:07 config-4.18.0-147.0.3.el8_1.x86_64
-rw-r--r-- 1 root root 119269 Nov 25 08:20 config-5.4.0
-rw-r--r-- 1 root root 119269 Nov 30 09:41 config-5.4.1
-rw-r--r-- 1 root root 97 Sep 22 09:31 customfont.step1
drwx----- 3 root root 16384 Dec 31 1969 efi/
-rw-r--r-- 1 root root 184380 Aug 12 2018 elf-memtest86+-5.01
drwx----- 2 root root 4096 Sep 26 13:22 grub2/
-rw----- 1 root root 66208244 Aug 27 16:37 initramfs-0-rescue-d240dc7b53a843729de84850
90a76d4e.img
-rw----- 1 root root 25980882 Nov 14 08:27 initramfs-4.18.0-147.0.3.el8_1.x86_64.img
-rw----- 1 root root 24237186 Nov 25 08:21 initramfs-5.4.0.img
-rw----- 1 root root 24237198 Nov 30 09:42 initramfs-5.4.1.img
drwxr-xr-x 3 root root 4096 Aug 27 16:35 loader/
-rw-r--r-- 1 root root 182704 Aug 12 2018 memtest86+-5.01
lrwxrwxrwx 1 root root 22 Nov 30 09:42 System.map -> /boot/System.map-5.4.1
-rw----- 1 root root 3839375 Nov 11 08:07 System.map-4.18.0-147.0.3.el8_1.x86_64
-rw-r--r-- 1 root root 4153017 Nov 25 08:20 System.map-5.4.0
-rw-r--r-- 1 root root 4153052 Nov 30 09:42 System.map-5.4.1
lrwxrwxrwx 1 root root 19 Nov 30 09:42 vmlinuz -> /boot/vmlinuz-5.4.1
-rwxr-xr-x 1 root root 7872864 Aug 27 16:36 vmlinuz-0-rescue-d240dc7b53a843729de8485090
a76d4e*
-rwxr-xr-x 1 root root 8106848 Nov 11 08:07 vmlinuz-4.18.0-147.0.3.el8_1.x86_64*
-rw-r--r-- 1 root root 8189088 Nov 25 08:20 vmlinuz-5.4.0
-rw-r--r-- 1 root root 8193184 Nov 30 09:42 vmlinuz-5.4.1
x8:/boot>
```

In this example, there are multiple possible kernels to boot into, each of which has four files associated with it:

- **vmlinuz** is the compressed kernel
- **initramfs** contains a complete initial root filesystem which is loaded as a ramdisk, as well as some essential kernel modules (generally, device drivers) and the programs needed to load them, that are required to load the real filesystem, at which point it is discarded
- **config** contains all the details about how the kernel was compiled; it is not needed for system operation
- **System.map** lists the complete kernel symbol table; it is used only for debugging purposes

Depending on which Linux distribution is being used, there will be variations in the above possible kernels. For example, the **initramfs** file may actually be called **initrd**.