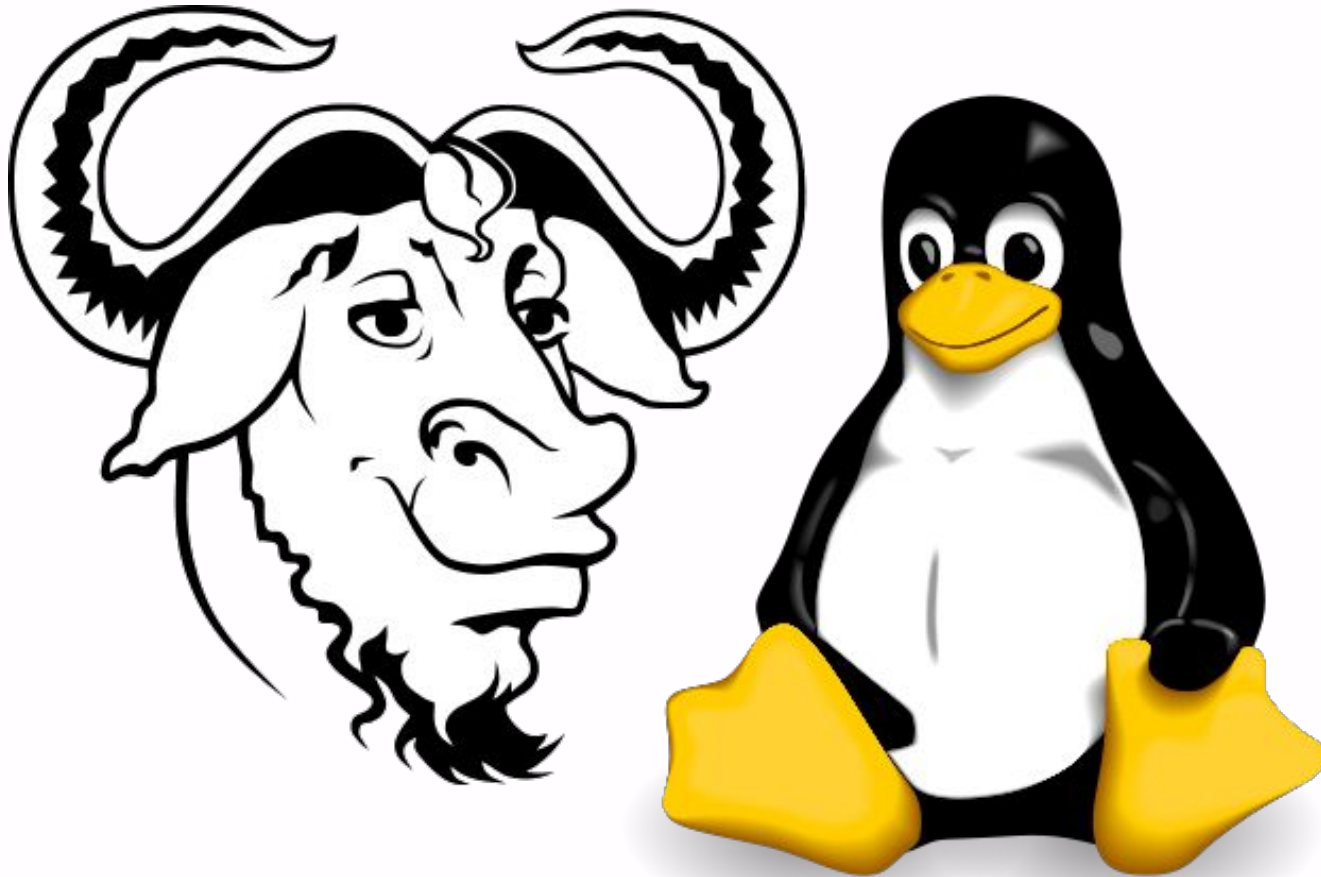


Introduction to Linux



What is Linux?

- **UNIX-like operating system (OS)**
- **Free and open source software (FOSS)**
- **Runs on more platforms than any other OS:**
 - mainframes, PCs, phones, embedded devices
- **Heavily used for web servers, cloud servers, supercomputers, embedded devices**
- **Many distributions:**
 - provide complete Linux software environments

Widely Used

- Used for web servers:

- Google** runs more than two million Linux servers

- Amazon** runs its website on Linux server

- The **New York Stock Exchange** runs on Linux

- Heavily used for cloud servers:

- Amazon's EC2** base OS is Linux (>500,000 servers)

- Base for many cell phones, tablets, netbooks:

Linux Distributions

- Linux is really the kernel plus device drivers.

- A Linux distribution is a packaging of:

- Linux kernel(s) + device drivers

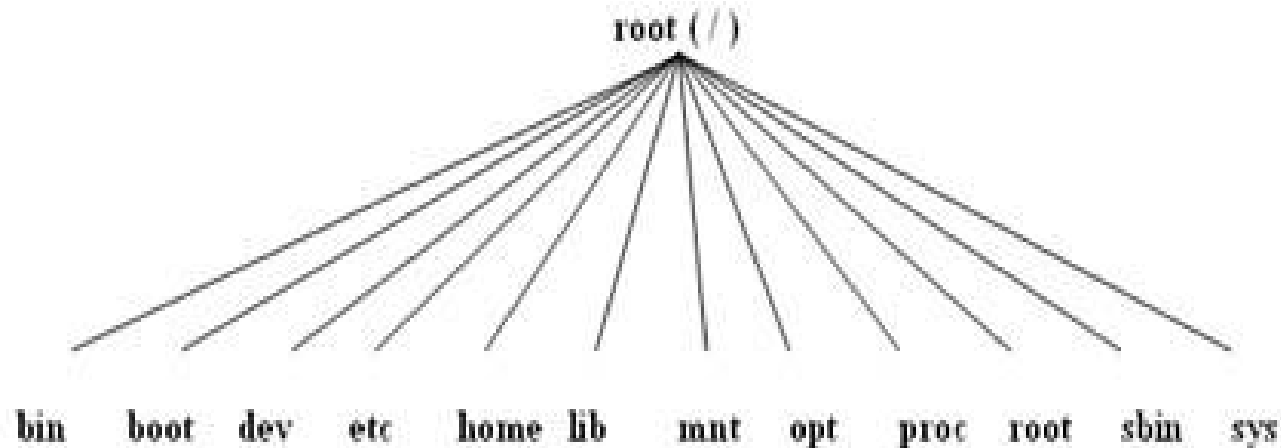
- shells (bash, csh, etc.)

- GUI (X11, Xfree, X.org)

- window managers (KDE, Gnome, etc.)

Linux FileSystem Hierarchy

- Set of directories and files that are made available by an Operating System.
- In Linux, the directories and files within the file system form a single tree structure.
- The top level directory of the file system hierarchy is known as “root directory” denoted as “/”



FileSystem Hierarchy

./bin – essential command binaries

./boot – bootable kernel files

./dev – device files

./etc – host specific system configuration

./home – user home directories

./lib – essential shared libraries and kernel modules

./media – mount point for removable media

./mnt – mount point for mounting a filesystem temporarily

./opt – optional software

FileSystem Hierarchy (contd.)

./proc – pseudo files that display/changes OS params

./root – home for root user

./sbin – essential system binaries

./tmp – temporary files

./usr – non-host specific, read only info, secondary hierarchy

./var – variable files like log files