Free Learning Tech

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Hack Devs
NoOne is Anonymous

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Technical Guys

Presenting Sunday Special

BASIC LINUX FUNDAMENTAL

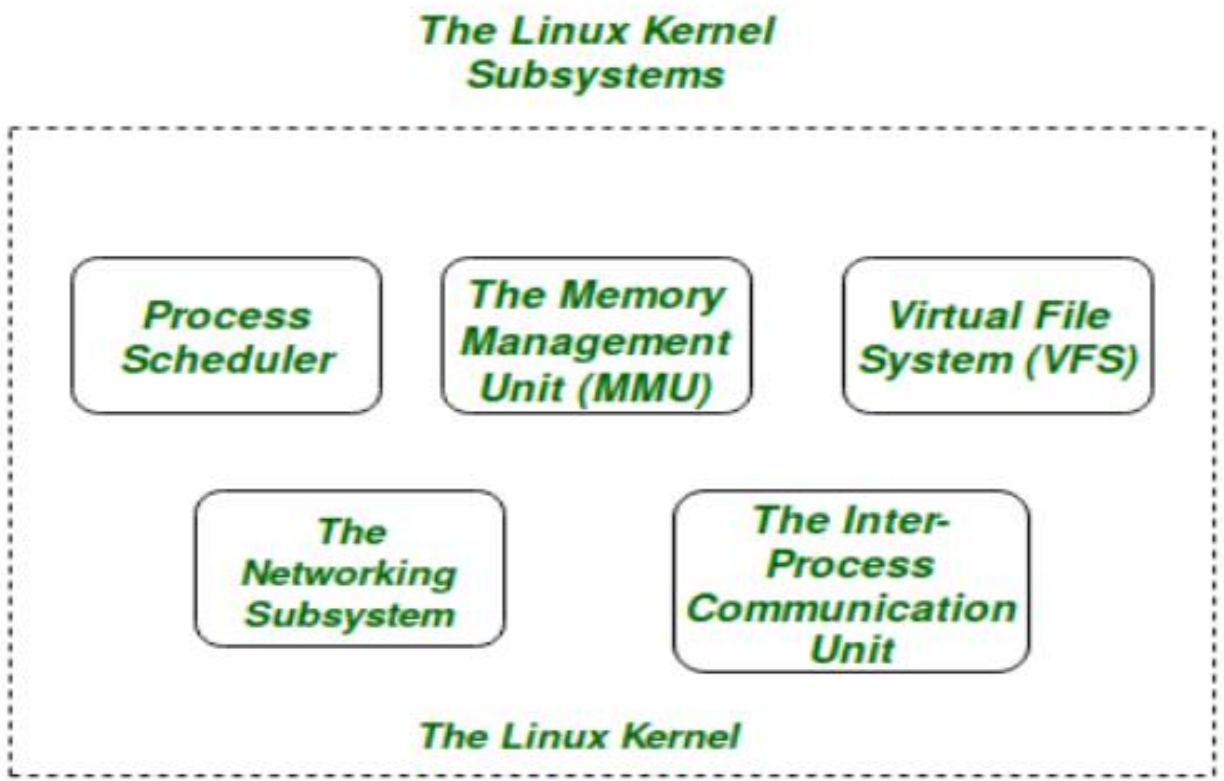
Introduction to Linux operating system

- Linux is a community of open-source Unix like operating systems that are based on the Linux Kernel.
- It was initially released by Linus Torvalds on September 17, 1991.

What is Kernal?

- A Kernel is a computer program that is the heart and core of an Operating System.
- The Kernel is responsible for low-level tasks such as
  →Disk management
  →Memory management
  →Task management
  →Security management
  →Device management
  →Resource allocation,
  →Scheduling.

Linux Kernal?



Advantages of Linux

- The main advantage of Linux, is it is an open-source operating system. This means the source code is easily available for everyone and you are allowed to contribute, modify and distribute the code to anyone without any permissions.
- Linux is freely available to use on the internet.
- It has large community support.
- It provides high stability. It rarely slows down or freezes and there is no need to reboot it after a short time.
- It maintain the privacy of the user.
- It is network friendly.
- It performs all tasks properly even if it has limited space on the hard disk.
- It is fast and easy to install from the web. It can also install on any hardware even on your old computer system.
- Linux is compatible with a large number of file formats.
- The flexibility of Linux is high. There is no need to install a complete Linux suit; you are allowed to install only required components.

Disadvantages of Linux

- It is not very user-friendly. So, it may be confusing for beginners.
- It has small peripheral hardware drivers as compared to windows.

Where is Linux Used?

- Websites that you visit
- Car Entertainment/control panel
- Point of Sale (PoS) systems such as checkout tills and registers in shops
- Critical infrastructures such as traffic light controllers or industrial sensors

Flavors of Linux

- The name "Linux" is actually an umbrella term for multiple OS's that are based on UNIX .
- Linux has many distros.

Popular Linux Distros

- Android
- Arch Linux
- Centos
- Debian
- Elementary OS
- Fedora
- Gentoo Linux
- Linux Mint
- Ubuntu
- Manjaro Linux
- Puppy Linux

Ubuntu Server can run on systems with only 512MB of RAM

Q- What year was the first release of a Linux Operating System?

- Answer- > 1991

Basic two commands

- To write something.
  →echo

- Find out what user is logged in
  →whoami

Interacting with file system

- For listing the files
  →ls
- For changing directory
  →cd
- For reading a file
  →cay
- Check working directory
  →pwd

Searching for files

- Using Find
  →find –name {filename}
  →find –name {*.txt}
- Using locate
  →locate {filename}
- Reading Manual
  →man {command name}

Searching for files

- Using Find
  →find –name filename
  →find –name *.txt
- Using locate
  →locate filename
- See unlisted files
  →ls --all

Shell operator

- For formatting whole file
  >
- For appending values
  >>
- For executing two or more commands
  ||

Copying, moving and Determining type of files

- For Copying file
  cp {filename to be copied} {file name that would after copying}
- For Moving file
  mv {filename}
- For determining type
  file {filename}

Making and deleting files and directories

- Making file
  →touch {filename}
- Making directories
  →mkdir {directory name}
- Removing files and folders
  →rm {file or folder name}

Permissions

- List permission of all folders and files
  →ls –l
- Creating new user
  →useradd {name of user}
  →passwd {username}
  →Switching user
  →su {username}

Some useful commands

- Check history of commands
  →history
- It gives the information about the available RAM and the total used and available spaces of physical memory.
  →free
- To see calendar
  →cal
- Uptime
- Uname

Modifying permissions

→chmod {=/+/-} {permission r/w/x} {filename}

```
r       Permission to read the file.
w       Permission to write (or delete) the file.
x       Permission to execute the file, or, in
        the case of a directory, search it.
```