

1. What is Linux? What is the difference between Linux and Unix?

Answer -

- Linux word is derived from Linux Kernel.
- Linux is an free open source operating system. It is a software which manages hardware.
- Linux is only the kernel, and is not the full system that is used.
- It's just like there should a layer between hardware and your application, so it is Linux OS which manages that layer and communicates between software and hardware and manage all resources like CPU, memory etc.
- Linux is mostly used a open source OS nowadays.
- Unix is an operating system which can be only utilized by its copywriters.

2. What is Linux Kernel? Is it legal to edit Linux Kernel?

Answer -

- The Linux kernel is the main important component of a Linux operating system (OS) and is the core interface between a computer's hardware and its processes. It communicates between the 2, managing resources as efficiently as possible.
- Yes, Linux kernel is free and we can be modify by anyone.
- We can edit Linux Kernel because comes under General Public License (GPL) and anyone can edit it. It comes under the category of free and open source software.

3. What is LILO?

Answer -

- LILO full form is Linux LOader (LILO) meaning it lets you specify at boot time whether to start Linux or another operating system. It is a boot loader
- Basically it allows us to select which OS need to be loaded and run/used

4. What are the basic components of Linux?

Answer -

- Basic components of Linux are as follows:
- Bootloader - is a software that manages the boot process of OS
- Kernel - it is core part of Linux OS, managed CPU memory, peripheral devices
- Init system - it is subsystem that bootstrap the user space and starts with daemons.
- Daemons - it is the background services(eg. printing, scheduling)
- Graphical server (X server) - it is a subsystem that displays the graphics on the monitor.
- Desktop environment(Gnome, Xfce, Kde etc) - it a piece that interacts with user. it is a GUI
- Applications - we can download 1000+ application on run on linux

5. Which are the Shells used in Linux?

Answer -

- There are multiple shells available in Linux
- Mostly used shell is **Bash** shell
- Eg. of other shells(Bourne, C, Korn, Z Shell ..etc)

6. What is Swap Space?

Answer -

- In other terms, If a OS required more memory than physical memory installed on server then OS might use some parts from hard drives as if they were physical memory, this is called swap space.
- It is the space used in the disk instead of the memory

7. What is the difference between BASH and DOS?

Answer -

- BASH commands are case sensitive while DOS commands are not.
- In BASH, / character is a directory separator and \ acts as an escape character while in DOS, / serves as a command argument delimiter and \ is the directory separator

8. What command would you use to check how much memory is being used by Linux?

Answer -

- There are multiple ways you can check. Below commands can be used
- free
- top
- htop
- /proc/meminfo
- vmstat -s

9. Explain file permission in Linux.

Answer -

- All file and directory in Linux is assigned 3 type owner-set, group and others.

- All file and directory has 3 permissions defined for all 3 owners(Read-r, Write-w, Execute-x)
- Let take a example to understand
- -rwxrwxrwx File1
- In this file 1st Dash or hyphen means it is a file
- next rwx is for user (read write execute)
- next rwx is for group
- next rwx is for others
- we can change file permission by chmod command in two ways numeric and symbolic
- weightage for read(r) is 4, write(w) is 2, execute(x) is 1
- 0 means no permission,
- 1 means execute,
- 2 means only write,
- 3 means only write and execute,
- 4 means only read,
- 5 means only read and execute,
- 6 means only read and write,
- 7 means full permission read, write execute.
- eg if we want to change a file permission in above eg. File1 which has full permission then we can do as
- chmod 3digit filename
- 3digit - first digit represent user, second represent group, third represent others.
- eg. chmod 765 file1 -> this means user has full permission, group has only read and write permission, others have only read and execute permission.
- Same example in symbolic way syntax is chmod u+rwx,g+rw-e,o+rx-w file1