

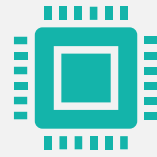


# BASIC LINUX ADMINISTRATION & INSTALLATION

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# INTRODUCTION



Linux is open-source, free to use kernel.













It is used by programmers, organizations, profit and non-profit companies to create **OS** to suit their individual requirements.



To prevent hacking attempts, many organizations keep their Linux operating systems private.

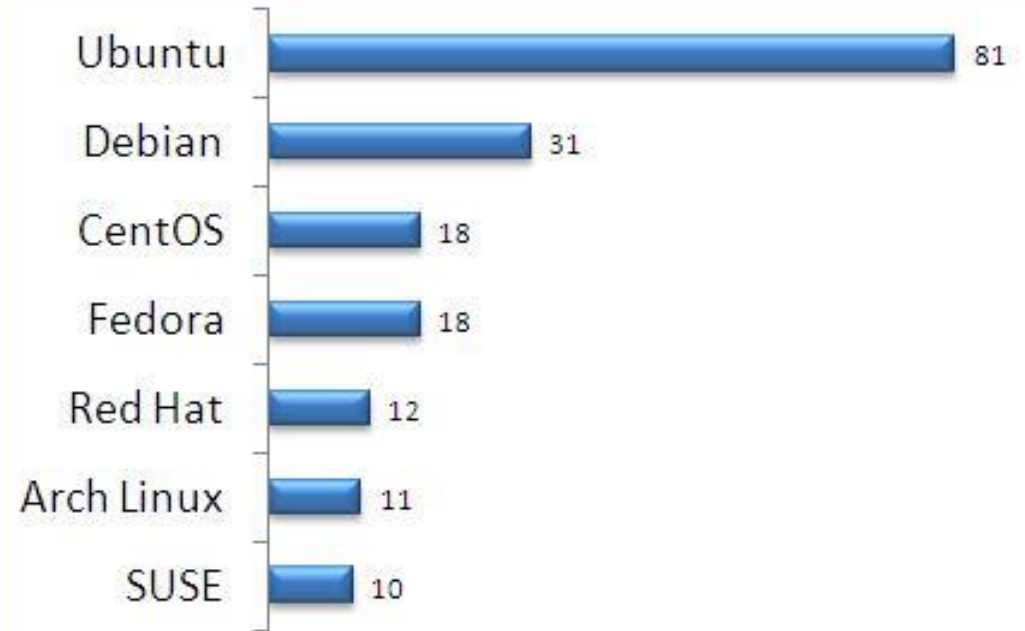
# LINUX DISTRO

Each Linux distribution is built for a specific purpose—built to meet the demands of its target users.

	Arch	This Linux Distro is popular amongst Developers. It is an independently developed system. It is designed for users who go for a do-it-yourself approach.
	CentOS	It is one of the most used Linux Distribution for enterprise and web servers. It is a free enterprise class Operating system and is based heavily on Red Hat enterprise Distro.
	Debian	Debian is a stable and popular non-commercial Linux distribution. It is widely used as a desktop Linux Distro and is user-oriented. It strictly acts within the Linux protocols.
	Fedora	Another Linux kernel based Distro, Fedora is supported by the Fedora project, an endeavor by Red Hat. It is popular among desktop users. Its versions are known for their short life cycle.
	Gentoo	It is a source based Distribution which means that you need to configure the code on your system before you can install it. It is not for Linux beginners, but it is sure fun for experienced users.
	LinuxMint	It is one of the most popular Desktop Distributions available out there. It launched in 2006 and is now considered to be the fourth most used Operating system in the computing world.
	OpenSUSE	It is an easy to use and a good alternative to MS Windows. It can be easily set up and can also run on small computers with obsolete configurations.
	RedHat enterprise	Another popular enterprise based Linux Distribution is Red Hat Enterprise. It has evolved from Red Hat Linux which was discontinued in 2004. It is a commercial Distro and very popular among its clientele.
	Slackware	Slackware is one of the oldest Linux kernel based OS's. It is another easy desktop Distribution. It aims at being a 'Unix like' OS with minimal changes to its kernel.
	Ubuntu	This is the third most popular desktop operating system after Microsoft Windows and Apple Mac OS. It is based on the Debian Linux Distribution, and it is known as its desktop environment.

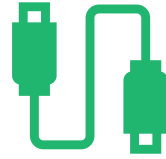
# LINUX DISTRIBUTIONS

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\* Naming the best Linux Distribution is difficult as they are made for different purpose.

# LINUX DISTRO INSTALLATION



USB stick



Live CD

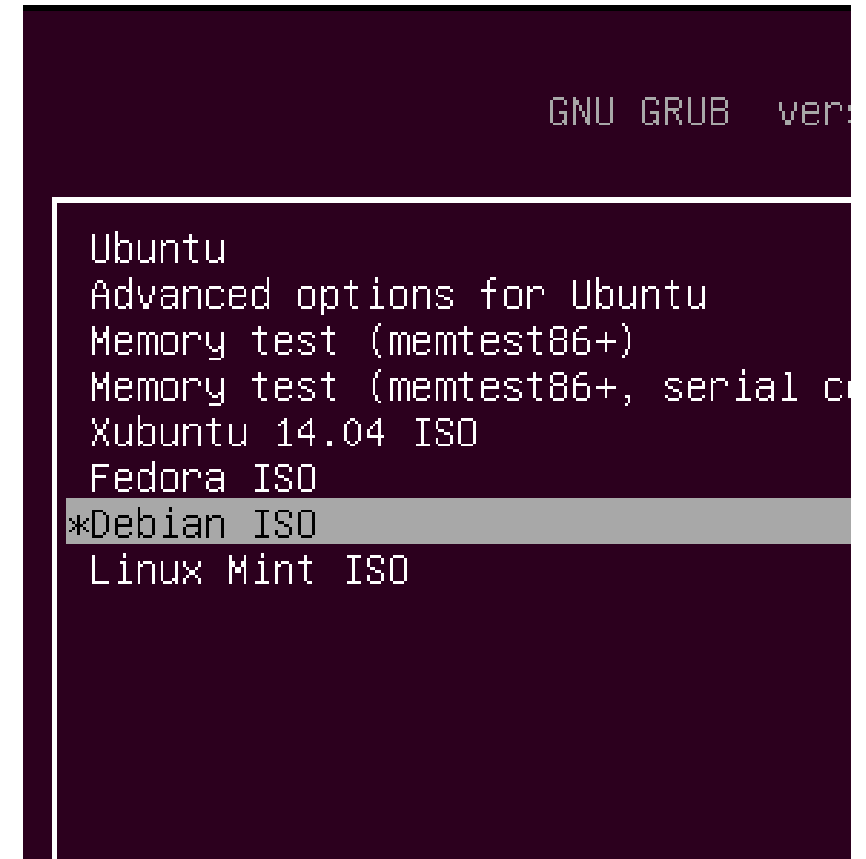


Virtual Installation

# GRUB (GRAND UNIFIED BOOTLOADER)

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- The stage 1 boot loader is loaded into the memory by the BIOS.
- The stage 1.5 boot loader is loaded into the memory by the stage 1 boot loader if required.
- The stage 2 boot loader can be loaded into the memory by the primary boot loader.
- The operating system or kernel is loaded into the memory by the secondary boot loader.



# LINUX SYSTEM ADMINISTRATION & CONFIGURATION



Monitor the system



Memory Usage



File System and Storage  
Management



System Users



Package Management



System Logs



Text manipulation



Scheduling tasks

# BASIC COMMANDS TO MONITOR LINUX SYSTEM

ps tree

- Processes and parent-child relationships

top

- Show top processes

ps

- Show process status

uname

- Show system information

uptime

- Tell how long the system has been running. Also number of users and system's load average.



# BASIC COMMANDS TO MONITOR MEMORY USAGE

vmstat

- Monitor virtual memory

free

- Display amount of free and used memory in the system.

htop

- Show top processes and memory consumed

# FILESYSTEMS & STORAGE MANAGEMENT

df

- Report disk free space and usage of filesystem.

du

- Calculates disk usage for a given directory.

mount

- Displays all mounted devices, their mount point, filesystem, and access.

fdisk

- Allocate drive space and register info on the partition table.

mkfs

- Create file system

# SYSTEM USERS

su: Switch user

who

- Displays currently logged in users.

users

- Show all users logged in.

groups

- Display groups you are part of.

id

- Display user and all group ids.

last

- Listing of most recent logins by users.

history

- Shell command to display previously entered commands.

useradd

- Add a user to the system

userdel

- Delete user from system.

# PACKAGE INSTALLATION

dpkg

- Debian and Ubuntu

apt

- Debian and Ubuntu

rpm

- Red Hat, Fedora, CentOS, Suse

yum

- Fedora and CentOS

pacman

- ArchLinux

# PACKAGE MANAGEMENT

locate

- Find location/list of files which contain a given partial name

which

- Find executable file location of command given

whereis

- Find executable file location of command given and related files

ls

- List directory contents. List file information

chmod

- Change file access permissions

chown

- Change file owner and group



THANK YOU

