**Linux For Beginners**

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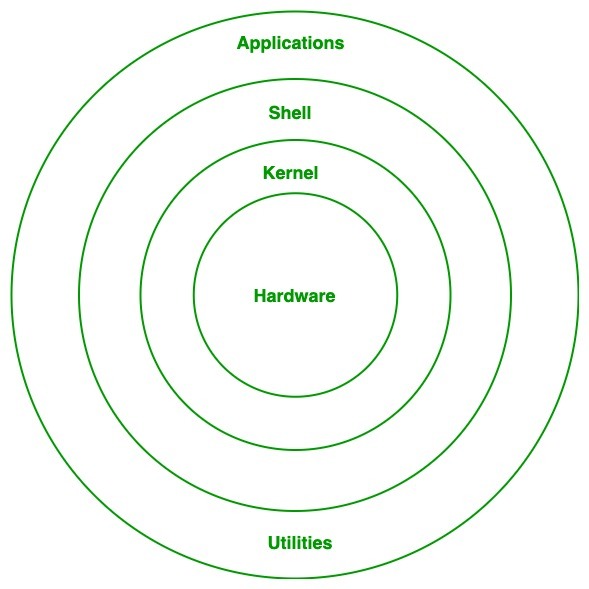
**0.1 Introduction to Linux**

In 1990, PCs were fully powered by UNIX but still free software was unavailable. In 1991, Linus Torvalds began developing an operating system called Linux which is a member of the large family UNIX-like OS. Linux was developed for an IBM- compatible personal computer based on Intel 80386 microprocessor. All features of UNIX were added in Linux within a few years, which gave rise to a mature operating system called Linux. Today Linux is supported by all kinds of workstations, home user PC and both server and client.

**What is Linux**

Linux is a free open source operating system based on UNIX that was created in 1991 by Linus Torvalds. Users can modify and create variations of the source code, known as distributions, for computers and other devices.

**Linux Architecture**



**Linux Distributions List**

Ubuntu

Linux Mint

Debian

Red Hat Enterprise / CentOS

Fedora

**Linux Features**

Free and Open-Source

multiple distributions - ubuntu,Linux Mint, Debian, RedHat, Centos, Fedora

Access to source code

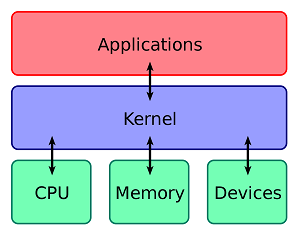
Better malware protection

Command line interface

**What is A shell**

A shell is a program that provides an interface between a user and an operating system OS kernel. An OS starts a shell for each user when the user logs in or opens a terminal or console window.

A kernel is the very core of a typical operating system. A kernel is a type of low-level programming that has its interfacing with the hardware on top of which all the applications run like - Disks, Ram, CPU etc.



A kernel is a program - It controls all computer operations, coordinates all executing utilities, ensures that executing utilities do not interfere with each other and schedules and manages all system processes.



By interfacing with a kernel, a shell provides a way for a user to execute utilities and programs.

**What is Shell Script**

A shell script is a list of commands in a computer program that is run by the Unix shell which is a command line interpreter.

**Types of Shells**

Bourne Shell -

**Bourne shell (sh) :**

The Bourne shell (sh), written by Steve Bourne at AT&T Bell Labs, is the original UNIX shell. A Bourne shell drawback is that it lacks features for interactive use, recall previous commands (history), built-in arithmetic and logical expression handling.

Command full-path name: /bin/sh and /sbin/sh

Non-root user default prompt: $

Root user default prompt : #

**Korn Shell (ksh) :**

Korn Shell (ksh), written by David Korn at AT&T Bell Labs, is a superset of the Bourne shell. It includes convenient programming features like built-in arithmetic and C-like arrays, functions, and string-manipulation facilities.

Command full-path name: /bin/ksh

Non-root user default prompt: $

Root user default prompt : #

**Bourne Again shell (bash):**

Bourne Again shell (bash) - compatible with the Bourne shell. It incorporates useful features from the Korn and C shells.

Command full-path name: /bin/bash.

Non-root user default prompt: bash-x.xx$

Root user default prompt : bash-x.xx#

**C Shell:**

The C shell (csh)- Is a UNIX enhancement written by Bill Joy at the University of California at Berkeley. Incorporated features for interactive use, such as aliases and command history also includes convenient programming features, such as built-in arithmetic and a C-like expression syntax.

Command full-path name: /bin/csh.

Non-root user default prompt: %

Root user default prompt : #

**Difference between sh and bash**

**Sh**  **Bash**

SHell Bourne Again SHell

Developed by Stephen R. Bourne Developed by Brain Fox

Predecessor of bash Successor of sh

sh is the not default SHELL Bash is the default SHELL

#!/bin/sh #!/bin/bash

It has less functionality. It has more Functionality with up-gradation

not as easy as bash Easy to use

**1. File commands**

**1.1 Command** : **ls**

Syntax: $ls

Explanation: It will show the full list or content of your directory.

Example -

azureuser@unbutu:~$ ls

A1 B

azureuser@unbutu:~$

**1. 2 Command** : **ls -al**

Syntax: $ls

Explanation: formatted listing with hidden files.

Example -

azureuser@unbutu:~$ ls -al

total 68

drwxr-xr-x 7 azureuser azureuser 4096 Jan 18 09:07 .

drwxr-xr-x 3 root root 4096 Jan 17 07:53 ..

-rw------- 1 azureuser azureuser 3612 Jan 18 13:14 .bash\_history

-rw-r--r-- 1 azureuser azureuser 220 Apr 4 2018 .bash\_logout

-rw-r--r-- 1 azureuser azureuser 3771 Apr 4 2018 .bashrc

drwx------ 2 azureuser azureuser 4096 Jan 17 07:54 .cache

**1.3 Command** : **cd**

Syntax: cd <dirname>

Explanation: is used to change the current working directory.

Example -

azureuser@unbutu:~$ cd B

azureuser@unbutu:~/B$

**1.4 Command** : **pwd**

Syntax: pwd

Explanation: pwd stands for Print Working Directory. It prints the path of the working directory, starting from the root.

Example -

azureuser@unbutu:~$ pwd

/home/azureuser

**1.5 Command** : **rm**

Syntax: rm [OPTION]. Filename

Explanation: rm stands for remove here. rm command is used to remove objects such as files, directories.

Example -

Ex1 -

azureuser@unbutu:~/B$ ls

A1 B1 D1 E1

azureuser@unbutu:~/B$ rm A1

azureuser@unbutu:~/B$ ls

B1 D1 E1

azureuser@unbutu:~/B$

Ex2 - Remove more files

azureuser@unbutu:~/B$ ls

B1 D1 E1

azureuser@unbutu:~/B$ rm B1 D1

azureuser@unbutu:~/B$ ls

E1

azureuser@unbutu:~/B$

Ex3-

azureuser@unbutu:~$ rm -f B1

azureuser@unbutu:~$ ls

B D1 Devops Devops.tar E1 dest.txt devops

azureuser@unbutu:~$

**1.6 Command** : **cp**

Syntax:

cp [OPTION] Source Destination

cp [OPTION] Source Directory

cp [OPTION] Source-1 Source-2 Source-3 Source-n Directory

Explanation: cp stands for copy. This command is used to copy files or groups of files or directory.

Example -

azureuser@unbutu:~$ cat dest.txt

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azureuser@unbutu:~$ touch E1

azureuser@unbutu:~$ ls

B B1 D1 E1 dest.txt

azureuser@unbutu:~$ cp dest.txt E1

azureuser@unbutu:~$ cat E1

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azureuser@unbutu:~$

Ex2 -

azureuser@unbutu:~$ ls

B B1 D1 E1 dest.txt

azureuser@unbutu:~$ cp E1 B

azureuser@unbutu:~$ ls

B B1 D1 E1 dest.txt

azureuser@unbutu:~$ cd B

azureuser@unbutu:~/B$ ls

A1 E1

azureuser@unbutu:~/B$

Ex3 -

azureuser@unbutu:~$ ls

B B1 D1 E1 dest.txt

azureuser@unbutu:~$ cp B1 D1 E1 B

azureuser@unbutu:~$ ls

B B1 D1 E1 dest.txt

azureuser@unbutu:~$ cd B

azureuser@unbutu:~/B$ ls

A1 B1 D1 E1

azureuser@unbutu:~/B$

**1.7 Command** : **mv**

Syntax: mv [Option] source destination

Explanation: mv stands for move. mv is used to move one or more files or directories from one place to another

Example -

Ex1 -

azureuser@unbutu:~$ ls

A1 B B1 C1 D1

azureuser@unbutu:~$ mv A1 B

azureuser@unbutu:~$ ls

B B1 C1 D1

azureuser@unbutu:~$ cd B

azureuser@unbutu:~/B$ ls

A1

azureuser@unbutu:~/B$

Ex2 - If the destination file doesn’t exist, it will be created.

azureuser@unbutu:~$ ls

B B1 C1 D1

azureuser@unbutu:~$ cat C1

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azureuser@unbutu:~$ mv C1 dest.txt

azureuser@unbutu:~$ ls

B B1 D1 dest.txt

azureuser@unbutu:~$ cat dest.txt

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azureuser@unbutu:~$

**1.8 Command** : **touch**

Syntax: $touch filename

Explanation: The touch command is a standard command used in the UNIX/Linux operating system which is used to create, change and modify timestamps of a file.

Example -

azureuser@unbutu:~$ touch devops

azureuser@unbutu:~$ ls

B B1 D1 E1 dest.txt devops

azureuser@unbutu:~$

**1. 9 Command** : **cat**

Syntax: $cat filename

Explanation: It reads data from the file and gives their content as output. It helps us to create, view, and concatenate files.

Example -

Ex1 -

azureuser@unbutu:~$ cat A1

Abc

Ex2 -

azureuser@unbutu:~$ cat> B1

Azure Devops^C

**1.10 Command** : **more**

Syntax: more [option] filename

Explanation: more commands are used to view the text files in the command prompt, displaying one screen at a time in case the file is large (For example log files). The more command also allows the user to scroll up and down through the page.

Example -

Ex1 -

azureuser@unbutu:~$ more C1

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azureuser@unbutu:~$ more -d dest.txt

Ex2 -

azureuser@unbutu:~$ more -d dest.txt

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Afghanistan

Albania

Algeria

Andorra

Angola

Antigua and Barbuda

--more--(89%)[Press space to continue, 'q' to quit.]

**1.11 Command** : **less**

Syntax: less <file>

Explanation: less command displays a file page-wise. By pressing spacebar, it displays next page and to quit , type ‘q’.

Example -

azureuser@unbutu:~$ less C1

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Practicing linux Commands

:

**1.12 Command** : **Head**

Syntax: head [option] file\_name

Explanation: The Linux head command prints the first lines of one or more files (or piped data) to standard output. By default, it shows the first 10 lines.

Example -

azureuser@unbutu:~$ head dest.txt

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Afghanistan

Albania

Algeria

Andorra

Angola

Antigua and Barbuda

Argentina

Armenia

Angola

azureuser@unbutu:~$

azureuser@unbutu:~$ head -5 dest.txt

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Afghanistan

Albania

Algeria

Andorra

azureuser@unbutu:~$

**1.13 Command** : **tail**

Syntax: tail [OPTION]... [FILE]...

Explanation: It is complementary to head command. The tail command, as the name implies, prints the last N number of data of the given input. By default, it prints the last 10 lines of the specified files.

Example -

Ex1 -

azureuser@unbutu:~$ tail dest.txt

Angola

Antigua and Barbuda

Argentina

Armenia

Angola

Antigua and Barbuda

Argentina

Armenia

Argentina

Armenia

azureuser@unbutu:~$

Ex2-

azureuser@unbutu:~$ tail -3 dest.txt

Armenia

Argentina

Armenia

azureuser@unbutu:~$

**1.14 Command** : **mkdir**

Syntax: mkdir [options...] [directories ...]

Explanation: mkdir command in Linux allows the user to create directories and multiple directories as well.

Example -

Ex1 - single directories

azureuser@unbutu:~/B$ ls

E1

azureuser@unbutu:~/B$ mkdir AzureDevops

azureuser@unbutu:~/B$ ls

AzureDevops E1

azureuser@unbutu:~/B$

Ex2 - multiple directories

azureuser@unbutu:~/B$ mkdir {test1,test2,test3}

azureuser@unbutu:~/B$ ls

AzureDevops E1 test1 test2 test3

azureuser@unbutu:~/B$

Ex3 - Creates a directory and sets full read, write, execute permissions for all users

azureuser@unbutu:~/B$ mkdir –m777 test6

azureuser@unbutu:~/B$ ls

AzureDevops E1 test1 test2 test3 test5 test6 –m700 –m777

azureuser@unbutu:~/B$

**1.15 Command** : **rmdir**

Syntax: rmdir <dirname>

Explanation: This command is used to delete a directory.

Example -

azureuser@unbutu:~$ mkdir Azure

azureuser@unbutu:~$ ls

Azure B B1 D1 E1 dest.txt

azureuser@unbutu:~$ rmdir Azure

azureuser@unbutu:~$ ls

B B1 D1 E1 dest.txt

azureuser@unbutu:~$

**2 System information**

**2.1 Command** : **whoiam**

Syntax: $whoiam

Explanation: It displays the username of the current user.

Example -

azureuser@unbutu:~$ whoami

azureuser

**2.2 Command** : **date**

Syntax: date [option]

Explanation: date command is used to display the system date and time.

Example -

Ex1 -

azureuser@unbutu:~$ date

Thu Jan 19 06:02:29 UTC 2023

Ex2 - -u Option: Displays the time in GMT

azureuser@unbutu:~$ date -u

Thu Jan 19 06:04:25 UTC 2023

**2.3 Command** : **man**

Syntax: $ man [COMMAND NAME]

Explanation: Man stands for manual and is used to get as much information as is possible about any commands that can be run within the terminal

Example -

Ex1 -

azureuser@unbutu:~$ man ls

LS(1) User Commands LS(1)

NAME

ls - list directory contents

SYNOPSIS

ls [OPTION]... [FILE]...

DESCRIPTION

List information about the FILEs (the current directory by default).

Sort entries alphabetically if none of -cftuvSUX nor --sort is speci‐

fied.

Ex2 -

azureuser@unbutu:~$ man echo

ECHO(1) User Commands ECHO(1)

NAME

echo - display a line of text

SYNOPSIS

echo [SHORT-OPTION]... [STRING]...

echo LONG-OPTION

DESCRIPTION

Echo the STRING(s) to standard output.

**2.4 Command** : **du**

Syntax: du [OPTION]... [FILE]....

Explanation: locate command in Linux is used to find the files by name.

Example -

azureuser@unbutu:~$ du dest.txt

4 dest.txt

azureuser@unbutu:~$ du -h /home/azureuser/dest.txt

4.0K /home/azureuser/dest.txt

azureuser@unbutu:~$

**2.5 Command** : **free**

Syntax: free [options]

Explanation: The Linux free command outputs a summary of RAM usage, including total, used, free, shared, and available memory and swap space.

Example -

azureuser@unbutu:~$ free

total used free shared buff/cache available

Mem: 934096 157716 213328 612 563052 622928

Swap: 0 0 0

azureuser@unbutu:~$

**3. Searching**

**3.1 Command** : **grep**

Syntax: grep [options] pattern [files]

Explanation: The grep filter searches a file for a particular pattern of characters, and displays all lines that contain that pattern.

Example -

Ex1 -

azureuser@unbutu:~$ grep -w "Azure" C1

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Ex2 -

azureuser@unbutu:~$ grep -n "Azure" C1

1:Learning Azure Devops

Ex3 -

azureuser@unbutu:~$ grep -l "Azure" \*

grep: B: Is a directory

C1

**4. Process Management**

**4.1 Command** : **ps**

Syntax: $ps [options]

Explanation: ps for viewing information related with the processes on a system which stands as abbreviation for “Process Status”.

Example -

Ex1 -

azureuser@unbutu:~$ ps

PID TTY TIME CMD

10164 pts/0 00:00:00 bash

10182 pts/0 00:00:00 ps

azureuser@unbutu:~$

Ex2-

azureuser@unbutu:~$ ps -r

PID TTY STAT TIME COMMAND

10186 pts/0 R+ 0:00 ps -r

azureuser@unbutu:~$

**5. File permissions**

5.1 Command : **chmod**

Syntax: chmod [mode-numerical/alphabetical] filename

Explanation: the chmod command is used to change the access mode of a file.

Example -

**5.1.1 Numerical Notation**

Ex1 - changing access to owner

azureuser@unbutu:~$ ls -la dest.txt

-rwxrwxrwx 1 azureuser azureuser 23 Jan 17 10:43 dest.txt

azureuser@unbutu:~$ chmod 477 dest.txt

azureuser@unbutu:~$ ls -la dest.txt

-r--rwxrwx 1 azureuser azureuser 23 Jan 17 10:43 dest.txt

Ex2 - changing access to group

azureuser@unbutu:~$ chmod 427 dest.txt

azureuser@unbutu:~$ ls -la dest.txt

-r---w-rwx 1 azureuser azureuser 23 Jan 17 10:43 dest.txt

azureuser@unbutu:~$

Ex3 - changing access to others

azureuser@unbutu:~$ chmod 421 dest.txt

azureuser@unbutu:~$ ls -la dest.txt

-r---w---x 1 azureuser azureuser 23 Jan 17 10:43 dest.txt

**5.1.2 Alphabetical notation**

Ex4 - Giving read,write,execute permissions

azureuser@unbutu:~$ ls -la dest.txt

-r---w---x 1 azureuser azureuser 23 Jan 17 10:43 dest.txt

azureuser@unbutu:~$ chmod u+wx,g+rx,o+rw dest.txt

azureuser@unbutu:~$ ls -la dest.txt

-rwxrwxrwx 1 azureuser azureuser 23 Jan 17 10:43 dest.txt

**6. useful commands**

**6.1 Command** : **echo**

Syntax: echo [option] [string]

Explanation: display a line of text

Example -

azureuser@unbutu:~$ echo "Azure Practice"

Azure Practice

**6.2 Command** : **sudo**

Syntax: sudo [command]

Explanation: Sudo stands for SuperUser DO and is used to access restricted files and operations.

Example -

Without Prefix Sudo :

azureuser@unbutu:~$ apt-get update

Reading package lists... Done

E: Could not open lock file /var/lib/apt/lists/lock - open (13: Permission denied)

With Prefix Sudo :

azureuser@unbutu:~$ sudo apt-get update

Hit:1 http://azure.archive.ubuntu.com/ubuntu bionic InRelease

Get:2 http://azure.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]

**6.3 Command** : **clear**

Syntax: $clear

Explanation: is used to clear the terminal screen.

Example -

before clear command:

azureuser@unbutu:~$ ls

A1

After clear command:

azureuser@unbutu:~$

**6.4 Command** : **sort**

Syntax: sort [options] Filename

Explanation: The 'sort' command sorts the file content in an alphabetical order.

Example -

azureuser@unbutu:~$ cat D1

Devops

Azure

azureuser@unbutu:~$ sort D1

Azure

Devops

azureuser@unbutu:~$ sort -r D1

Devops

Azure

azureuser@unbutu:~$

**6.5 Command** : **su**

Syntax: $su user

Explanation: it is used for switching to another user during a normal login session.

Example -

azureuser@unbutu:~$ su Ab

Password:

Ab@unbutu:/home/azureuser$ ls

B B1 D1 E1 dest.txt

Ab@unbutu:/home/azureuser$ cd ../..

Ab@unbutu:/$ ls

bin home lib64 opt sbin tmp vmlinuz.old

boot initrd.img lost+found proc snap usr

dev initrd.img.old media root srv var

etc lib mnt run sys vmlinuz

Ab@unbutu:/$

**6.6 Command** : **id**

Syntax: id [OPTION]... [USER]

Explanation: print real and effective user and group IDs

Example -

azureuser@unbutu:~$ id

uid=1000(azureuser) gid=1000(azureuser) groups=1000(azureuser),4(adm),20(dialout),24(cdrom),25(floppy),27(sudo),29(audio),30(dip),44(video),46(plugdev),108(lxd),114(netdev)

azureuser@unbutu:~$ id Ab

uid=1001(Ab) gid=1001(Ab) groups=1001(Ab)

azureuser@unbutu:~$ id -u Ab

1001

azureuser@unbutu:~$ id -g Ab

1001

azureuser@unbutu:~$

**6.7 Command** : **cut**

Syntax: cut OPTION... [FILE]...

Explanation: It is a command for cutting out the sections from each line of files and writing the result to standard output. It can be used to cut parts of a line by byte position, character and field.

Example -

azureuser@unbutu:~$ cut -c1 dest.txt

l

A

A

A

A

A

azureuser@unbutu:~$ cut -c1-2 dest.txt

le

Af

Al

Al

An

azureuser@unbutu:~$

**6.8 Command** : **history**

Syntax: $ history

Explanation: history command is used to view the previously executed command.

Example -

azureuser@unbutu:~$ history

1 clear

2 ls

3 cat > A1

4 cat A1

5 ls

6 cat A1

7 cat > A1

8 cat A1

9 clear

10 ls -l

11 chown Ab A1

12 chown root A1

13 sudo chown Ab A1

14 chown Ab A1.txt

15 ls -l

16 chown newowner A1

17 sudo chown Ab:azuruser A1

18 su

19 ss

20 clear

21 sudo su

22 clear

23 pwd

24 echo "Azure Practice"

25 apt-get update

26 sudo apt-get update

27 clear

**6.9 Command** : **locate**

Syntax: locate [OPTION]... PATTERN...

Explanation: locate command in Linux is used to find the files by name.

Example -

azureuser@unbutu:~$ locate dest.txt

/home/azureuser/dest.txt

azureuser@unbutu:~$

**6.10 Command** : **top**

Syntax: $top [options]

Explanation: this command shows a real-time view of running processes in Linux and displays kernel-managed tasks. The command also provides a system information summary that shows resource utilization, including CPU and memory usage.

Example -

Ex1-

top - 12:34:09 up 1 day, 4:47, 1 user, load average: 0.00, 0.00, 0.00

Tasks: 95 total, 1 running, 49 sleeping, 0 stopped, 0 zombie

%Cpu(s): 0.0 us, 0.0 sy, 0.0 ni,100.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st

KiB Mem : 934096 total, 203960 free, 158000 used, 572136 buff/cache

KiB Swap: 0 total, 0 free, 0 used. 622396 avail Mem

PID USER PR NI VIRT RES SHR S %CPU %MEM TIME+ COMMAND

1678 root 20 0 460648 27468 9868 S 0.3 2.9 1:28.37 python3

1 root 20 0 160576 9796 6552 S 0.0 1.0 0:03.49 systemd

2 root 20 0 0 0 0 S 0.0 0.0 0:00.00 kthreadd

Ex2 -

azureuser@unbutu:~$ top -h

procps-ng 3.3.12

Usage:

top -hv | -bcHiOSs -d secs -n max -u|U user -p pid(s) -o field -w [cols]

azureuser@unbutu:~$

**6.11 Command** : **w**

Syntax: $w

Explanation: The w command is a built-in tool that allows administrators to view information about users that are currently logged in. This includes their username, where they are logged in from, and what they are currently doing.

Example -

azureuser@unbutu:~$ w

12:41:44 up 1 day, 4:55, 1 user, load average: 0.00, 0.00, 0.00

USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT

azureuse pts/0 182.75.74.86 12:35 0.00s 0.02s 0.00s w

azureuser@unbutu:~$

**6.12 Command** : **uptime**

Syntax: uptime [-options]

Explanation: It is used to find out how long the system is active (running).

Example -

Ex1 -

azureuser@unbutu:~$ uptime

12:44:05 up 1 day, 4:57, 1 user, load average: 0.00, 0.00, 0.00

azureuser@unbutu:~$

Ex2 -

azureuser@unbutu:~$ uptime -s

2023-01-17 07:46:16

azureuser@unbutu:~$

**6.13 Command** : **ifconfig**

Syntax: ifconfig [OPTION]

Explanation: ifconfig command without any argument displays the details of all the active interfaces. This command also displays the assigned ip address of active interfaces.

Example -

azureuser@unbutu:~$ ifconfig

eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500

inet 10.0.0.4 netmask 255.255.255.0 broadcast 10.0.0.255

inet6 fe80::6245:bdff:fe72:e1e0 prefixlen 64 scopeid 0x20<link>

ether 60:45:bd:72:e1:e0 txqueuelen 1000 (Ethernet)

RX packets 362368 bytes 132195910 (132.1 MB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 408458 bytes 108556562 (108.5 MB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536

inet 127.0.0.1 netmask 255.0.0.0

inet6 ::1 prefixlen 128 scopeid 0x10<host>

loop txqueuelen 1000 (Local Loopback)

RX packets 1588 bytes 139740 (139.7 KB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 1588 bytes 139740 (139.7 KB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

azureuser@unbutu:~$

Ex2 -

azureuser@unbutu:~$ ifconfig -s

Iface MTU RX-OK RX-ERR RX-DRP RX-OVR TX-OK TX-ERR TX-DRP TX-OVR Flg

eth0 1500 362582 0 0 0 408718 0 0 0 BMRU

lo 65536 1588 0 0 0 1588 0 0 0 LRU

azureuser@unbutu:~$

**6.14 Command** : **sed**

Syntax: sed 'argument' filename

Explanation: SED is a powerful text stream editor. Can do insertion, deletion, search and replace(substitution)

Example -

azureuser@unbutu:~$ sed "azure1" dest.txt

learning

zure1

azureuser@unbutu:~$

**6.15 Command** : **tree**

Syntax: $tree

Explanation: Tree is a recursive directory listing program that produces a depth indented listing of files

Example -

azureuser@unbutu:~$ tree

.

├── B

│ ├── AzureDevops

│ ├── E1

│ ├── test1

│ ├── test2

│ ├── test3

│ ├── test5

│ ├── test6

│ ├── –m700

│ └── –m777

├── B1

├── D1

├── Devops

│ ├── Learning.txt

│ ├── azure.txt

│ └── devops.txt

├── Devops.tar

├── E1

├── dest.txt

└── devops

10 directories, 10 files

azureuser@unbutu:~$

**Reference**

Youtube link - https://www.youtube.com/watch?v=Wgi-OfbP2Gw

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