

# LINUX COMMANDS 03

1. Top – to show usage of cpu:

```
narendar@ubuntu:~/Desktop$ top
```

```
top - 06:01:22 up 1 day, 10:56, 1 user, load average: 0.00, 0.06, 0.04
Tasks: 177 total, 1 running, 176 sleeping, 0 stopped, 0 zombie
%Cpu(s): 1.0 us, 0.7 sy, 0.0 ni, 97.9 id, 0.0 wa, 0.0 hi, 0.3 si, 0.0 st
MiB Mem : 1968.2 total, 305.1 free, 1123.3 used, 750.5 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used. 844.9 avail Mem
```

| PID   | USER     | PR | NI | VIRT    | RES    | SHR    | S | %CPU | %MEM | TIME+   | COMMAND  |
|-------|----------|----|----|---------|--------|--------|---|------|------|---------|----------|
| 22977 | narendar | 20 | 0  | 3477228 | 370984 | 129548 | S | 1.3  | 18.4 | 1:38.41 | /usr/bi+ |
| 25573 | narendar | 20 | 0  | 554004  | 52960  | 41880  | S | 0.3  | 2.6  | 0:01.44 | /usr/li+ |
| 26372 | root     | 20 | 0  | 0       | 0      | 0      | I | 0.3  | 0.0  | 0:00.16 | [kworke+ |
| 1     | root     | 20 | 0  | 22840   | 14080  | 9728   | S | 0.0  | 0.7  | 0:28.67 | /usr/li+ |
| 2     | root     | 20 | 0  | 0       | 0      | 0      | S | 0.0  | 0.0  | 0:00.02 | [kthrea+ |
| 3     | root     | 20 | 0  | 0       | 0      | 0      | S | 0.0  | 0.0  | 0:00.00 | [pool_w+ |

2. get list of running processes:

```
narendar@ubuntu:~/Desktop$ ps -ef
```

| UID      | PID   | PPID  | C | STIME | TTY   | TIME     | CMD                          |
|----------|-------|-------|---|-------|-------|----------|------------------------------|
| root     | 26660 | 2     | 0 | 06:01 | ?     | 00:00:00 | [kworker/02:0-events_unbound |
| narendar | 26673 | 26489 | 0 | 06:03 | ?     | 00:00:00 | /usr/bin/python3 /usr/bin/gn |
| narendar | 26674 | 26673 | 0 | 06:03 | ?     | 00:00:00 | /usr/bin/gnome-terminal.real |
| narendar | 26680 | 22735 | 2 | 06:03 | ?     | 00:00:00 | /usr/libexec/gnome-terminal- |
| narendar | 26687 | 26680 | 0 | 06:03 | pts/0 | 00:00:00 | bash                         |
| narendar | 26693 | 26687 | 0 | 06:03 | pts/0 | 00:00:00 | ps -ef                       |

```
narendar@ubuntu:~/Desktop$
```

To check only Nginx process

```
narendar@ubuntu:~/Desktop$ ps -ef | grep nginx
```

```
narendar 26702 26687 0 06:07 pts/0 00:00:00 grep --color=auto nginx
```

```
narendar@ubuntu:~/Desktop$ ps -ef | grep nginx
```

|           |                                  |       |   |       |       |          |                              |
|-----------|----------------------------------|-------|---|-------|-------|----------|------------------------------|
| root      | 27081                            | 1     | 0 | 06:11 | ?     | 00:00:00 | nginx: master process /usr/s |
| bin/nginx | -g daemon on; master_process on; |       |   |       |       |          |                              |
| www-data  | 27083                            | 27081 | 0 | 06:11 | ?     | 00:00:00 | nginx: worker process        |
| narendar  | 28891                            | 28877 | 0 | 06:21 | pts/0 | 00:00:00 | grep --color=auto nginx      |

```
narendar@ubuntu:~/Desktop$ ps -ef | grep nginx
```

|           |                                  |       |   |       |       |          |                              |
|-----------|----------------------------------|-------|---|-------|-------|----------|------------------------------|
| root      | 27081                            | 1     | 0 | 06:11 | ?     | 00:00:00 | nginx: master process /usr/s |
| bin/nginx | -g daemon on; master_process on; |       |   |       |       |          |                              |
| www-data  | 27083                            | 27081 | 0 | 06:11 | ?     | 00:00:00 | nginx: worker process        |
| narendar  | 28893                            | 28877 | 0 | 06:21 | pts/0 | 00:00:00 | grep --color=auto nginx      |

```
narendar@ubuntu:~/Desktop$
```

## To install ubuntu package nginx

```
narendar@ubuntu:~/Desktop$ sudo apt install nginx
[sudo] password for narendar:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  git-man liberror-perl
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  nginx-common
Suggested packages:
  fcgiwrap nginx-doc
The following NEW packages will be installed:
  nginx nginx-common
0 upgraded, 2 newly installed, 0 to remove and 219 not upgraded.
Need to get 552 kB of archives.
After this operation, 1,596 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

## To start nginx running and check nginx status

```
narendar@ubuntu:~/Desktop$ sudo systemctl start nginx
narendar@ubuntu:~/Desktop$ sudo systemctl status nginx
● nginx.service - A high performance web server and a reverse proxy server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: en>
   Active: active (running) since Mon 2025-02-10 06:09:54 UTC; 6min ago
     Docs: man:nginx(8)
  Process: 27078 ExecStartPre=/usr/sbin/nginx -t -q -g daemon on; master_proc>
  Process: 27080 ExecStart=/usr/sbin/nginx -g daemon on; master_process on; (>
 Main PID: 27081 (nginx)
    Tasks: 2 (limit: 2278)
   Memory: 1.7M (peak: 2.0M)
      CPU: 12ms
   CGroup: /system.slice/nginx.service
           └─27081 "nginx: master process /usr/sbin/nginx -g daemon on; maste>
             └─27083 "nginx: worker process"

Feb 10 06:09:54 ubuntu systemd[1]: Starting nginx.service - A high performance >
Feb 10 06:09:54 ubuntu systemd[1]: Started nginx.service - A high performance w>
```

## To stop nginx running

```
narendar@ubuntu:~/Desktop$ sudo systemctl stop nginx
[sudo] password for narendar:
narendar@ubuntu:~/Desktop$ ps -ef | grep nginx
narendar  30259  28877  0 06:30 pts/0    00:00:00 grep --color=auto nginx
narendar@ubuntu:~/Desktop$
```

## To kill a process when unable to stop running

```
narendar@ubuntu:~/Desktop$ sudo systemctl start nginx
narendar@ubuntu:~/Desktop$ ps -ef | grep nginx
root      30353      1  0 06:36 ?        00:00:00 nginx: master process /usr/sbin/nginx -g daemon on
n;
www-data  30354    30353  0 06:36 ?        00:00:00 nginx: worker process
narendar  30366    28877  0 06:37 pts/0    00:00:00 grep --color=auto nginx
narendar@ubuntu:~/Desktop$ kill -9 30353
bash: kill: (30353) - Operation not permitted
narendar@ubuntu:~/Desktop$ sudo kill -9 30353
narendar@ubuntu:~/Desktop$ ps -ef | grep nginx
narendar  30382    28877  0 06:38 pts/0    00:00:00 grep --color=auto nginx
narendar@ubuntu:~/Desktop$ sudo systemctl status nginx
* nginx.service - A high performance web server and a reverse proxy server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: en>
   Active: failed (Result: signal) since Mon 2025-02-10 06:38:08 UTC; 1min 36>
  Duration: 1min 30.905s
   Docs: man:nginx(8)
   Process: 30349 ExecStartPre=/usr/sbin/nginx -t -q -g daemon on; master_pro>
   Process: 30350 ExecStart=/usr/sbin/nginx -g daemon on; master_process on; (>
   Main PID: 30353 (code=killed, signal=KILL)
      CPU: 17ms

Feb 10 06:36:37 ubuntu systemd[1]: Starting nginx.service - A high performance >
Feb 10 06:36:37 ubuntu systemd[1]: Started nginx.service - A high performance w>
Feb 10 06:38:08 ubuntu systemd[1]: nginx.service: Main process exited, code=kil>
Feb 10 06:38:08 ubuntu systemd[1]: nginx.service: Killing process 30354 (nginx)>
```

### 3. Compress or bundle directory:

Tar command cvf

```
narendar@ubuntu:~/Desktop$ cd
narendar@ubuntu:~$ mkdir test_tar
narendar@ubuntu:~$ cd test_tar/
narendar@ubuntu:~/test_tar$ touch a b c d e f
narendar@ubuntu:~/test_tar$ ls
a b c d e f
narendar@ubuntu:~/test_tar$ tar cvf techie.tar test_tar/_
tar: test_tar/_: Cannot stat: No such file or directory
tar: Exiting with failure status due to previous errors
narendar@ubuntu:~/test_tar$ tar cvf techie.tar test_tar/
tar: test_tar: Cannot stat: No such file or directory
tar: Exiting with failure status due to previous errors
narendar@ubuntu:~/test_tar$ cd ..
narendar@ubuntu:~$ tar cvf techie.tar test_tar/
test_tar/
test_tar/techie.tar
test_tar/c
test_tar/a
test_tar/b
test_tar/e
test_tar/d
test_tar/f
narendar@ubuntu:~$ sudo cp techie.tar /opt/
[sudo] password for narendar:
narendar@ubuntu:~$ cd /opt/
narendar@ubuntu:/opt$ ls
techie.tar
```

## Tar command xvf

```
narendar@ubuntu:~$ sudo cp techie.tar /opt/
[sudo] password for narendar:
narendar@ubuntu:~$ cd /opt/
narendar@ubuntu:/opt$ ls
techie.tar
narendar@ubuntu:/opt$ sudo tar xvf techie.tar
test_tar/
test_tar/techie.tar
test_tar/c
test_tar/a
test_tar/b
test_tar/e
test_tar/d
test_tar/f
narendar@ubuntu:/opt$ ls
techie.tar  test_tar
narendar@ubuntu:/opt$ cd test_tar
narendar@ubuntu:/opt/test_tar$ ls
a b c d e f techie.tar
```

## 4. Zip command

..

## 5. To know which OS we use

```
narendar@ubuntu:/$ cat /etc/os-release
PRETTY_NAME="Ubuntu 24.04.1 LTS"
NAME="Ubuntu"
VERSION_ID="24.04"
VERSION="24.04.1 LTS (Noble Numbat)"
VERSION_CODENAME=noble
ID=ubuntu
ID_LIKE=debian
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"
UBUNTU_CODENAME=noble
LOGO=ubuntu-logo
```

## 6. To know IP Address of any domain

```
narendar@ubuntu:/$ nslookup google.com
Server:          127.0.0.53
Address:         127.0.0.53#53

Non-authoritative answer:
Name:   google.com
Address: 142.250.199.142
Name:   google.com
Address: 2404:6800:4009:811::200e

narendar@ubuntu:/$ nslookup fb.com
Server:          127.0.0.53
Address:         127.0.0.53#53

Non-authoritative answer:
Name:   fb.com
Address: 163.70.140.35
Name:   fb.com
Address: 2a03:2880:f185:85:face:b00c:0:25de
```

## 7. To check remote connections

```
narendar@ubuntu:/$ ping www.google.com
PING www.google.com (142.251.42.36) 56(84) bytes of data:
64 bytes from bom12s20-in-f4.1e100.net (142.251.42.36): icmp_seq=1 ttl=255 time=17.8 ms
64 bytes from bom12s20-in-f4.1e100.net (142.251.42.36): icmp_seq=2 ttl=255 time=18.6 ms
64 bytes from bom12s20-in-f4.1e100.net (142.251.42.36): icmp_seq=3 ttl=255 time=23.6 ms
64 bytes from bom12s20-in-f4.1e100.net (142.251.42.36): icmp_seq=4 ttl=255 time=18.7 ms
64 bytes from bom12s20-in-f4.1e100.net (142.251.42.36): icmp_seq=5 ttl=255 time=19.0 ms
64 bytes from bom12s20-in-f4.1e100.net (142.251.42.36): icmp_seq=6 ttl=255 time=18.4 ms
64 bytes from bom12s20-in-f4.1e100.net (142.251.42.36): icmp_seq=7 ttl=255 time=18.8 ms
```

## 8. To download files from internet: wget

```
narendar@ubuntu:~/Desktop$ ls
narendar@ubuntu:~/Desktop$ pwd
/home/narendar/Desktop
narendar@ubuntu:~/Desktop$ wget https://tomcat.apache.org/tomcat-6.0-doc/appdev/sample/sample.war
--2025-02-10 09:43:12-- https://tomcat.apache.org/tomcat-6.0-doc/appdev/sample/sample.war
Resolving tomcat.apache.org (tomcat.apache.org)... 151.101.2.132, 2a04:4e42::644
Connecting to tomcat.apache.org (tomcat.apache.org)|151.101.2.132|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 4606 (4.5K)
Saving to: 'sample.war'

sample.war          100%[=====>]    4.50K  ---KB/s    in 0s

2025-02-10 09:43:12 (45.5 MB/s) - 'sample.war' saved [4606/4606]

narendar@ubuntu:~/Desktop$ ls
sample.war
```

## 9. SSh – secure connect local machine

## 10.SCP secure copy from Windows to Linux

## 11. AWK & SED secure copy from Linux to Windows