

Prod support commands:

Ls

```
root@ICPL14580: /home
root@ICPL14580: /home# ls
archivepractice  employee_test_data.csv  imp2.txt  my_output.log  new_dir  sample2.txt  sample5.txt  sampledir  test_data
backup.tar       ifelsescript.sh        log       myfolder       nohup.out  sample3.txt  sample6.txt  sampledir2  test_data.csv
dir3            imp1.txt               logdir    myscript.sh    sample1.txt  sample4.txt  sample7.txt  sampledir3  test_data1.csv
root@ICPL14580: /home#
```

Cd

```
root@ICPL14580: /home# ls
archivepractice  employee_test_data.csv  imp2.txt  my_output.log  new_dir  sample2.txt  sample5.txt  sampledir  test_data
backup.tar       ifelsescript.sh        log       myfolder       nohup.out  sample3.txt  sample6.txt  sampledir2  test_data.csv
dir3            imp1.txt               logdir    myscript.sh    sample1.txt  sample4.txt  sample7.txt  sampledir3  test_data1.csv
root@ICPL14580: /home# cd
root@ICPL14580: ~# pwd
/root
root@ICPL14580: ~#
```

Mkdir

```

root@ICPL14580:/home# mkdir practice
root@ICPL14580:/home# ls -la
total 72
drwxr-xr-x 1 root root 4096 Dec 17 10:42 .
drwxr-xr-x 1 root root 4096 Oct 10 06:43 ..
drwxr-xr-x 1 root root 4096 Dec 17 04:46 .hiddendir
-rw-r--r-- 1 root root 0 Dec 17 04:46 .hiddenfile
-rw-r--r-- 1 root root 0 Dec 17 04:46 .hiddenfile2
drwxr-xr-x 1 root root 4096 Dec 17 07:24 archivepractice
-rw-r--r-- 1 root root 10240 Dec 17 06:48 backup.tar
drwxr-xr-x 1 root root 4096 Dec 17 06:08 dir3
-rw-r--r-- 1 root root 17581 Dec 12 05:30 employee_test_data.csv
-rwxrwxr-- 1 root root 155 Oct 19 09:55 ifelsescript.sh
-rw-r--r-- 1 root root 0 Dec 17 06:24 imp1.txt
-rw-r--r-- 1 root root 0 Dec 17 06:24 imp2.txt
drwxr-xr-x 1 root root 4096 Dec 17 05:44 log
drwxr-xr-x 1 root root 4096 Dec 17 07:49 logdir
-rw-r--r-- 1 root root 0 Dec 17 10:15 my_output.log
drwxr-xr-x 1 root root 4096 Dec 17 05:49 myfolder
-rwxrwxrwx 1 root root 95 Oct 19 08:45 myscript.sh
drwxr-xr-x 1 root root 4096 Dec 17 06:06 new_dir
-rw----- 1 root root 0 Dec 17 10:12 nohup.out
drwxr-xr-x 1 root root 4096 Dec 17 10:42 practice
-rw-r--r-- 1 root root 0 Oct 19 07:56 sample1.txt
-rw-r--r-- 1 root root 122 Oct 18 12:48 sample2.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample3.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample4.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample5.txt
-rw-r--r-- 1 root root 0 Oct 19 06:45 sample6.txt
-rw-r--r-- 1 root root 0 Oct 19 06:45 sample7.txt
drwxr-xr-x 1 root root 4096 Dec 17 05:30 sampledир
drwxrwxrwx 1 root root 4096 Dec 17 05:27 sampledир2
drwxr-xr-x 1 root root 4096 Dec 17 05:27 sampledир3
-rw-r--r-- 1 root root 16475 Dec 12 05:19 test_data
-rw-r--r-- 1 root root 1 Dec 12 05:17 test_data.csv
-rw-r--r-- 1 root root 16473 Dec 12 05:22 test_data1.csv
root@ICPL14580:/home#

```

Rm

```

root@ICPL14580:/home# ls -la
total 72
drwxr-xr-x 1 root root 4096 Dec 17 10:44 .
drwxr-xr-x 1 root root 4096 Oct 10 06:43 ..
drwxr-xr-x 1 root root 4096 Dec 17 04:46 .hiddendir
-rw-r--r-- 1 root root 0 Dec 17 04:46 .hiddenfile
-rw-r--r-- 1 root root 0 Dec 17 04:46 .hiddenfile2
drwxr-xr-x 1 root root 4096 Dec 17 07:24 archivepractice
-rw-r--r-- 1 root root 10240 Dec 17 06:48 backup.tar
drwxr-xr-x 1 root root 4096 Dec 17 06:08 dir3
-rw-r--r-- 1 root root 17581 Dec 12 05:30 employee_test_data.csv
-rwxrwxr-- 1 root root 155 Oct 19 09:55 ifelsescript.sh
-rw-r--r-- 1 root root 0 Dec 17 06:24 imp1.txt
-rw-r--r-- 1 root root 0 Dec 17 06:24 imp2.txt
drwxr-xr-x 1 root root 4096 Dec 17 05:44 log
drwxr-xr-x 1 root root 4096 Dec 17 07:49 logdir
-rw-r--r-- 1 root root 0 Dec 17 10:15 my_output.log
drwxr-xr-x 1 root root 4096 Dec 17 05:49 myfolder
-rwxrwxrwx 1 root root 95 Oct 19 08:45 myscript.sh
drwxr-xr-x 1 root root 4096 Dec 17 06:06 new_dir
-rw----- 1 root root 0 Dec 17 10:12 nohup.out
-rw-r--r-- 1 root root 0 Oct 19 07:56 sample1.txt
-rw-r--r-- 1 root root 122 Oct 18 12:48 sample2.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample3.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample4.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample5.txt
-rw-r--r-- 1 root root 0 Oct 19 06:45 sample6.txt
-rw-r--r-- 1 root root 0 Oct 19 06:45 sample7.txt
drwxr-xr-x 1 root root 4096 Dec 17 05:30 sampledир
drwxrwxrwx 1 root root 4096 Dec 17 05:27 sampledир2
drwxr-xr-x 1 root root 4096 Dec 17 05:27 sampledир3
-rw-r--r-- 1 root root 16475 Dec 12 05:19 test_data
-rw-r--r-- 1 root root 1 Dec 12 05:17 test_data.csv
-rw-r--r-- 1 root root 16473 Dec 12 05:22 test_data1.csv

```

Cp command

```
👤 root@ICPL14580:/home#  
root@ICPL14580:/home# vi source.txt  
root@ICPL14580:/home# cp source.txt destination.txt  
root@ICPL14580:/home# vi destination.txt  
root@ICPL14580:/home#
```

Mv command

```

root@ICPL14580:/home# vi source.txt
root@ICPL14580:/home# cp source.txt destination.txt
root@ICPL14580:/home# vi destination.txt
root@ICPL14580:/home# mv source.txt source2.txt
root@ICPL14580:/home# vi source2.txt
root@ICPL14580:/home# ls -l
total 72
drwxr-xr-x 1 root root 4096 Dec 17 07:24 archivepractice
-rw-r--r-- 1 root root 10240 Dec 17 06:48 backup.tar
-rw-r--r-- 1 root root 20 Dec 17 10:48 destination.txt
drwxr-xr-x 1 root root 4096 Dec 17 06:08 dir3
-rw-r--r-- 1 root root 17581 Dec 12 05:30 employee_test_data.csv
-rwxrwxr-- 1 root root 155 Oct 19 09:55 ifelsescript.sh
-rw-r--r-- 1 root root 0 Dec 17 06:24 imp1.txt
-rw-r--r-- 1 root root 0 Dec 17 06:24 imp2.txt
drwxr-xr-x 1 root root 4096 Dec 17 05:44 log
drwxr-xr-x 1 root root 4096 Dec 17 07:49 logdir
-rw-r--r-- 1 root root 0 Dec 17 10:15 my_output.log
drwxr-xr-x 1 root root 4096 Dec 17 05:49 myfolder
-rwxrwxrwx 1 root root 95 Oct 19 08:45 myscript.sh
drwxr-xr-x 1 root root 4096 Dec 17 06:06 new_dir
-rw----- 1 root root 0 Dec 17 10:12 nohup.out
-rw-r--r-- 1 root root 0 Oct 19 07:56 sample1.txt
-rw-r--r-- 1 root root 122 Oct 18 12:48 sample2.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample3.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample4.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample5.txt
-rw-r--r-- 1 root root 0 Oct 19 06:45 sample6.txt
-rw-r--r-- 1 root root 0 Oct 19 06:45 sample7.txt
drwxr-xr-x 1 root root 4096 Dec 17 05:30 sampledир
drwxrwxrwx 1 root root 4096 Dec 17 05:27 sampledир2
drwxr-xr-x 1 root root 4096 Dec 17 05:27 sampledир3
-rw-r--r-- 1 root root 20 Dec 17 10:53 source2.txt
-rw-r--r-- 1 root root 16475 Dec 12 05:19 test_data
-rw-r--r-- 1 root root 1 Dec 12 05:17 test_data.csv
-rw-r--r-- 1 root root 16473 Dec 12 05:22 test_data1.csv
root@ICPL14580:/home#

```

Chmod:

```

root@ICPL14580:/home# chmod 700 source2.txt
root@ICPL14580:/home# ls -l
total 72
drwxr-xr-x 1 root root 4096 Dec 17 07:24 archivepractice
-rw-r--r-- 1 root root 10240 Dec 17 06:48 backup.tar
-rw-r--r-- 1 root root 20 Dec 17 10:48 destination.txt
drwxr-xr-x 1 root root 4096 Dec 17 06:08 dir3
-rw-r--r-- 1 root root 17581 Dec 12 05:30 employee_test_data.csv
-rwxrwxr-- 1 root root 155 Oct 19 09:55 ifelsescript.sh
-rw-r--r-- 1 root root 0 Dec 17 06:24 imp1.txt
-rw-r--r-- 1 root root 0 Dec 17 06:24 imp2.txt
drwxr-xr-x 1 root root 4096 Dec 17 05:44 log
drwxr-xr-x 1 root root 4096 Dec 17 07:49 logdir
-rw-r--r-- 1 root root 0 Dec 17 10:15 my_output.log
drwxr-xr-x 1 root root 4096 Dec 17 05:49 myfolder
-rwxrwxrwx 1 root root 95 Oct 19 08:45 myscript.sh
drwxr-xr-x 1 root root 4096 Dec 17 06:06 new_dir
-rw----- 1 root root 0 Dec 17 10:12 nohup.out
-rw-r--r-- 1 root root 0 Oct 19 07:56 sample1.txt
-rw-r--r-- 1 root root 122 Oct 18 12:48 sample2.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample3.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample4.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample5.txt
-rw-r--r-- 1 root root 0 Oct 19 06:45 sample6.txt
-rw-r--r-- 1 root root 0 Oct 19 06:45 sample7.txt
drwxr-xr-x 1 root root 4096 Dec 17 05:30 sampledир
drwxrwxrwx 1 root root 4096 Dec 17 05:27 sampledир2
drwxr-xr-x 1 root root 4096 Dec 17 05:27 sampledир3
-rwx----- 1 root root 20 Dec 17 10:53 source2.txt
-rw-r--r-- 1 root root 16475 Dec 12 05:19 test_data
-rw-r--r-- 1 root root 1 Dec 12 05:17 test_data.csv
-rw-r--r-- 1 root root 16473 Dec 12 05:22 test_data1.csv

```

Df and du

```

root@ICPL14580:/home# df
Filesystem      1K-blocks      Used Available Use% Mounted on
rootfs          249179612 95027352 154152260 39% /
none            249179612 95027352 154152260 39% /dev
none            249179612 95027352 154152260 39% /run
none            249179612 95027352 154152260 39% /run/lock
none            249179612 95027352 154152260 39% /run/shm
none            249179612 95027352 154152260 39% /run/user
tmpfs           249179612 95027352 154152260 39% /sys/fs/cgroup
C:\             249179612 95027352 154152260 39% /mnt/c
root@ICPL14580:/home# du
0      ./hiddendir
0      ./archivepractice/examplendir
4      ./archivepractice
8      ./bob
0      ./dir3
0      ./log
8      ./logdir
0      ./myfolder
0      ./new_dir
0      ./sampledir/subsampledir
0      ./sampledir
0      ./sampledir2
0      ./sampledir3
92     .
root@ICPL14580:/home#

```

Ps

```

root@ICPL14580:/home# ps
  PID TTY          TIME CMD
  637 tty1      00:00:00 init
  638 tty1      00:00:00 bash
  750 tty1      00:00:00 ps
root@ICPL14580:/home#

```

Top

```
root@icpl14580: /home
top - 11:04:58 up 6:32, 0 user, load average: 0.52, 0.58, 0.59
Tasks: 4 total, 1 running, 3 sleeping, 0 stopped, 0 zombie
%Cpu(s): 5.3 us, 7.4 sy, 0.0 ni, 87.0 id, 0.0 wa, 0.3 hi, 0.0 si, 0.0 st
MiB Mem : 16016.5 total, 4940.7 free, 11075.8 used, 224.0 buff/cache
MiB Swap: 30417.4 total, 29035.9 free, 1381.6 used. 4940.7 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM    TIME+  COMMAND
    1 root        20   0     8952     332    288 S   0.0   0.0   0:00.34 init
   637 root        20   0     8952     232    184 S   0.0   0.0   0:00.00 init
   638 root        20   0    14376    4084   3996 S   0.0   0.0   0:00.38 bash
   751 root        20   0    17336    3864   1648 R   0.0   0.0   0:00.01 top
```

Htop

```
root@icpl14580: /home

 0[|||||] 17.7% 4[|||||] 11.8%
 1[|] 2.0% 5[|] 4.6%
 2[|||||] 9.8% 6[|||||] 4.6%
 3[|] 4.0% 7[|||||] 7.3%
Mem[|||||] 10.5G/15.6G Tasks: 4, 1 thr, 0 kthr; 1 running
Swp[|] 1.38G/29.7G Load average: 0.52 0.58 0.59
Uptime: 06:33:19

Main I/O
PID USER      PRI  NI    VIRT    RES    SHR S  %CPU  %MEM    TIME+  Command
  1 root        20   0     8952     332    288 S   0.0   0.0   0:00.32 /init
  6 root        20   0     8952     232    184 S   0.0   0.0   0:00.00 /init
 637 root        20   0     8952     232    184 S   0.0   0.0   0:00.00 /init
 638 root        20   0    14376    4084   3996 S   0.0   0.0   0:00.40 -bash
 752 root        20   0    13856    3084   1860 R   0.0   0.0   0:00.07 htop

F1Help F2Setup F3Search F4Filter F5Tree F6SortBy F7Nice F8Nice +F9Kill F10Quit
```

Kill


```

root@ICPL14580:/home# ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.0   8952   332 ?        Ss1  04:32   0:00 /init
root       637  0.0  0.0   8952   232 tty1     Ss   10:12   0:00 /init
root       638  0.0  0.0  14376  4084 tty1     S    10:12   0:00 -bash
root       754 14.2  0.0  16312  2764 tty1     R    11:06   0:00 ps aux
root@ICPL14580:/home# ps sleep 300 &
[1] 755
root@ICPL14580:/home# error: conflicting format options

Usage:
ps [options]

Try 'ps --help <simple|list|output|threads|misc|all>'
  or 'ps --help <s|l|o|t|m|a>'
  for additional help text.

For more details see ps(1).
sleep 300 &
[2] 756
[1]  Exit 1                  ps sleep 300
root@ICPL14580:/home# ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.0   8952   332 ?        Ss1  04:32   0:00 /init
root       637  0.0  0.0   8952   232 tty1     Ss   10:12   0:00 /init
root       638  0.0  0.0  14376  4084 tty1     S    10:12   0:00 -bash
root       756  0.2  0.0  11164   928 tty1     S    11:06   0:00 sleep 300
root       757 75.0  0.0  16312  2760 tty1     R    11:07   0:00 ps aux
root@ICPL14580:/home# kill 756
root@ICPL14580:/home# ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.0   8952   332 ?        Ss1  04:32   0:00 /init
root       637  0.0  0.0   8952   232 tty1     Ss   10:12   0:00 /init
root       638  0.0  0.0  14376  4084 tty1     S    10:12   0:00 -bash
root       758 30.0  0.0  16312  2764 tty1     R    11:07   0:00 ps aux
[2]+  Terminated          sleep 300
root@ICPL14580:/home#

```

Pkill

```

root@ICPL14580:/home# ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.7  0.0   8952   328 ?        Ss1  13:17   0:00 /init
root         7  0.0  0.0   8952   228 tty1    Ss   13:17   0:00 /init
root         8  0.4  0.0  14244  3896 tty1    S    13:17   0:00 -bash
root        25  0.0  0.0  16312  2764 tty1    R    13:17   0:00 ps aux
root@ICPL14580:/home# sleep 300 &
[1] 26
root@ICPL14580:/home# ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.4  0.0   8952   328 ?        Ss1  13:17   0:00 /init
root         7  0.0  0.0   8952   228 tty1    Ss   13:17   0:00 /init
root         8  0.3  0.0  14244  3896 tty1    S    13:17   0:00 -bash
root        26  0.2  0.0  11164   928 tty1    S    13:17   0:00 sleep 300
root        27  0.0  0.0  16312  2756 tty1    R    13:17   0:00 ps aux
root@ICPL14580:/home# pkill sleep
[1]+  Terminated                  sleep 300
root@ICPL14580:/home# ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.2  0.0   8952   328 ?        Ss1  13:17   0:00 /init
root         7  0.0  0.0   8952   228 tty1    Ss   13:17   0:00 /init
root         8  0.2  0.0  14376  4052 tty1    S    13:17   0:00 -bash
root        29  0.0  0.0  16312  2764 tty1    R    13:18   0:00 ps aux
root@ICPL14580:/home#

```

```

root@ICPL14580:/home# ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.0   8952   332 ?        Ss1  04:32   0:00 /init
root        637  0.0  0.0   8952   232 tty1    Ss   10:12   0:00 /init
root        638  0.0  0.0  14376  4084 tty1    S    10:12   0:00 -bash
root        759  0.4  0.0  11164   928 tty1    S    11:08   0:00 sleep 300
root        761  3.7  0.0  16312  2764 tty1    R    11:08   0:00 ps aux
root@ICPL14580:/home# pkill sleep
[1]+  Terminated                  sleep 300
root@ICPL14580:/home# ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.0   8952   332 ?        Ss1  04:32   0:00 /init
root        637  0.0  0.0   8952   232 tty1    Ss   10:12   0:00 /init
root        638  0.0  0.0  14376  4084 tty1    S    10:12   0:00 -bash
root        763  0.0  0.0  16312  2764 tty1    R    11:08   0:00 ps aux
root@ICPL14580:/home#

```

Nice and renice

```

root@ICPL14580:/home# ps -eo pid,user,ni,command
  PID USER      NI  COMMAND
    1 root         0  /init
   637 root         0  /init
   638 root         0  -bash
   764 root         0  sleep 300
   768 root         0  ps -eo pid,user,ni,command
root@ICPL14580:/home# nice -n 10 sleep
sleep: missing operand
Try 'sleep --help' for more information.
root@ICPL14580:/home# nice -n 10 sleep 300
^C
root@ICPL14580:/home# ps -eo pid,user,ni,command
  PID USER      NI  COMMAND
    1 root         0  /init
   637 root         0  /init
   638 root         0  -bash
   764 root         0  sleep 300
   771 root         0  ps -eo pid,user,ni,command
root@ICPL14580:/home# nice -n 10 -p sleep 300
nice: invalid option -- 'p'
Try 'nice --help' for more information.
root@ICPL14580:/home# renice -n 10 -p sleep 300
renice: bad process ID value: sleep
renice: failed to get priority for 300 (process ID): No such process
root@ICPL14580:/home# renice -n 10 -p 764
764 (process ID) old priority 0, new priority 10
root@ICPL14580:/home# nice -n 5 -p 764
nice: invalid option -- 'p'
Try 'nice --help' for more information.
root@ICPL14580:/home# nice -n 5 764
nice: '764': No such file or directory
root@ICPL14580:/home# renice -n 0 -p 764
764 (process ID) old priority 10, new priority 0
root@ICPL14580:/home#

```

Nohup

```

root@ICPL14580:/home# nohup ls -l &
[1] 31
root@ICPL14580:/home# nohup: ignoring input and appending output to 'nohup.out'
wc -c
ls -l
^C
[1]+  Done                  nohup ls -l
root@ICPL14580:/home# cat nohup.out
total 72
drwxr-xr-x 1 root root 4096 Dec 17 07:24 archivepractice
-rw-r--r-- 1 root root 10240 Dec 17 06:48 backup.tar
drwxr-x--- 1 bob bob 4096 Dec 17 10:58 bob
-rw-r--r-- 1 root root 20 Dec 17 10:48 destination.txt
drwxr-xr-x 1 root root 4096 Dec 17 06:08 dir3
-rw-r--r-- 1 root root 17581 Dec 12 05:30 employee_test_data.csv
-rwxrwxr-- 1 root root 155 Oct 19 09:55 ifelsescript.sh
-rw-r--r-- 1 root root 0 Dec 17 06:24 imp1.txt
-rw-r--r-- 1 root root 0 Dec 17 06:24 imp2.txt
drwxr-xr-x 1 root root 4096 Dec 17 05:44 log
drwxr-xr-x 1 root root 4096 Dec 17 07:49 logdir
-rw-r--r-- 1 root root 0 Dec 17 10:15 my_output.log
drwxr-xr-x 1 root root 4096 Dec 17 05:49 myfolder
-rw-r--r-- 1 root root 0 Dec 17 13:24 myoutput1.log
-rwxrwxrwx 1 root root 95 Oct 19 08:45 myscript.sh
drwxr-xr-x 1 root root 4096 Dec 17 06:06 new_dir
-rw----- 1 root root 0 Dec 17 10:12 nohup.out
-rw-r--r-- 1 root root 0 Oct 19 07:56 sample1.txt
-rw-r--r-- 1 root root 122 Oct 18 12:48 sample2.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample3.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample4.txt
-rw-r--r-- 1 root root 0 Oct 19 06:44 sample5.txt
-rw-r--r-- 1 root root 0 Oct 19 06:45 sample6.txt
-rw-r--r-- 1 root root 0 Oct 19 06:45 sample7.txt
drwxr-xr-x 1 root root 4096 Dec 17 05:30 sampledир
drwxrwxrwx 1 root root 4096 Dec 17 05:27 sampledир2

```

Ping

```

root@ICPL14580:/# ping google.com
PING google.com (172.217.166.110) 56(84) bytes of data.
64 bytes from maa05s09-in-f14.1e100.net (172.217.166.110): icmp_seq=1 ttl=116 time=149 ms
64 bytes from maa05s09-in-f14.1e100.net (172.217.166.110): icmp_seq=2 ttl=116 time=93.4 ms
64 bytes from maa05s09-in-f14.1e100.net (172.217.166.110): icmp_seq=3 ttl=116 time=195 ms
64 bytes from maa05s09-in-f14.1e100.net (172.217.166.110): icmp_seq=4 ttl=116 time=104 ms
64 bytes from maa05s09-in-f14.1e100.net (172.217.166.110): icmp_seq=5 ttl=116 time=132 ms
^C
--- google.com ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4005ms
rtt min/avg/max/mdev = 93.376/134.795/195.460/36.155 ms
root@ICPL14580:/#

```

Netstat:

```

root@ICPL14580:/home# netstat
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
Active UNIX domain sockets (w/o servers)
Proto RefCnt Flags               Type                   State                  I-Node   Path
root@ICPL14580:/home#

```

Ss

```

root@ICPL14580:/home# ss
Cannot open netlink socket: Protocol not supported
Cannot open netlink socket: Protocol not supported
Cannot open netlink socket: Protocol not supported
Cannot open netlink socket: Protocol not supported
Cannot open netlink socket: Protocol not supported
Cannot open netlink socket: Protocol not supported
Cannot open netlink socket: Protocol not supported
Cannot open netlink socket: Protocol not supported
Netid      State      Recv-Q      Send-Q      Local Address:Port      Peer Address:Port      Process
root@ICPL14580:/home#

```

Ifconfig

```

root@ICPL14580:/home# ifconfig
eth2: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.22.96.1 netmask 255.255.240.0 broadcast 172.22.111.255
    inet6 fe80::b185:6c24:dfbb:2b5 prefixlen 64 scopeid 0xfd<compat,link,site,host>
    ether 00:15:5d:4d:3f:31 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

eth3: flags=65<UP,RUNNING> mtu 1472
    unspec [NONE SET] netmask 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
    inet6 2001:0:2851:fc0:28f8:8f88:cef0:3784 prefixlen 64 scopeid 0x0<global>
    inet6 fe80::28f8:8f88:cef0:3784 prefixlen 64 scopeid 0xfd<compat,link,site,host>
    ether 00:00:00:00:00:00 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 1500
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0xfe<compat,link,site,host>
    loop (Local Loopback)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wifi0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.146.15 netmask 255.255.255.0 broadcast 192.168.146.255
    ether 74:12:b3:ba:8f:8d (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

```

Ip

```

valid_ifc forever preferred_ifc forever
root@ICPL14580:/home# ip route
none 224.0.0.0/4 dev eth0 proto unspec metric 256
none 255.255.255.255 dev eth0 proto unspec metric 256
none 224.0.0.0/4 dev eth1 proto unspec metric 256
none 255.255.255.255 dev eth1 proto unspec metric 256
none 172.22.96.0/20 dev eth2 proto unspec metric 256
none 172.22.96.1 dev eth2 proto unspec metric 256
none 172.22.111.255 dev eth2 proto unspec metric 256
none 224.0.0.0/4 dev eth2 proto unspec metric 256
none 255.255.255.255 dev eth2 proto unspec metric 256
none 127.0.0.0/8 dev lo proto unspec metric 256
none 127.0.0.1 dev lo proto unspec metric 256
none 127.255.255.255 dev lo proto unspec metric 256
none 224.0.0.0/4 dev lo proto unspec metric 256
none 255.255.255.255 dev lo proto unspec metric 256
none default via 192.168.146.42 dev wifi0 proto unspec metric 0
none 192.168.146.0/24 dev wifi0 proto unspec metric 256
none 192.168.146.15 dev wifi0 proto unspec metric 256
none 192.168.146.255 dev wifi0 proto unspec metric 256
none 224.0.0.0/4 dev wifi0 proto unspec metric 256
none 255.255.255.255 dev wifi0 proto unspec metric 256
none 224.0.0.0/4 dev wifi1 proto unspec metric 256
none 255.255.255.255 dev wifi1 proto unspec metric 256
none 224.0.0.0/4 dev wifi2 proto unspec metric 256
none 255.255.255.255 dev wifi2 proto unspec metric 256

```

Uptime

```

root@ICPL14580:/home# uptime
 13:50:14 up 33 min,  0 user,  load average: 0.52, 0.58, 0.59
root@ICPL14580:/home#

```

Iostat

```

root@ICPL14580:/home# iostat
Linux 4.4.0-19041-Microsoft (ICPL14580)      12/17/24      _x86_64_      (8 CPU)

avg-cpu:  %user   %nice %system %iowait  %steal   %idle
           5.84    0.00   7.92    0.00    0.00   86.23

Device            tps    kB_read/s    kB_wrtn/s    kB_dscd/s    kB_read    kB_wrtn    kB_dscd

```

Free

```
root@ICPL14580:/home# free
              total        used        free      shared  buff/cache   available
Mem:      16400880     11208652      5192228       17720       229352       5192228
Swap:      31147448       241384     30906064
root@ICPL14580:/home#
```

Dmesg

```
root@ICPL14580:/home# dmesg
[  0.013069] Microsoft 4.4.0-19041.4355-Microsoft 4.4.35
[  0.145480] <3>init: (1) ERROR: ConfigInitializeCommon:665: Failed to mount /usr/lib/wsl/drive
[  0.145485] : 19
[  0.145689] <3>init: (1) ERROR: ConfigInitializeCommon:665: Failed to mount /usr/lib/wsl/lib
[  0.145693] 19
[  0.471093] <3>init: (1) ERROR: UpdateTimezone:97: Asia/Calcutta timezone not found. Is the tzdata package installed?
[  0.471101] ;
[  0.471107] init: (1) ERROR: InitEntryWsl:2605: UpdateTimezone failed
root@ICPL14580:/home#
```

Sar

```
root@ICPL14580:/home# sar
Cannot open /var/log/sysstat/sa17: No such file or directory
Please check if data collecting is enabled
root@ICPL14580:/home#
```

Lsof


```

root@ICPL14580:/home# lsof
COMMAND PID TID TASKCMD USER FD TYPE DEVICE SIZE NODE NAME
init 1 root cwd DIR 0,2 4096 7036874417901290 /
init 1 root rtd DIR 0,2 4096 7036874417901290 /
init 1 root txt REG 0,2 644432 6755399441208681 /init
init 1 root mem REG 0,0 152937 /init (path dev=0,2, inode=6755399441208681)
init 1 root 3w CHR 1,11 22799473113733058 /dev/kmsg
init 1 root 0u CHR 1,3 19421773393205470 /dev/null
init 1 root 1u CHR 1,3 19421773393205470 /dev/null
init 1 root 2u CHR 1,3 19421773393205470 /dev/null
init 1 root 4u CHR 10,50 10977524091885831 /dev/lxss
init 1 root 5u unknown /unknown (stat: Operation not permitted)
init 1 root 8u DIR 0,2 4096 7036874417901290 /
init 1 root 9u sock 0,0 8 can't identify protocol
init 1 root 10u unknown anon_inode (stat: Operation not permitted)
init 1 root 6u unknown anon_inode (stat: Operation not permitted)
init 1 6 init root cwd DIR 0,2 4096 7036874417901290 /
init 1 6 init root rtd DIR 0,2 4096 7036874417901290 /
init 1 6 init root txt REG 0,2 644432 6755399441208681 /init
init 1 6 init root mem REG 0,0 152937 /init (path dev=0,2, inode=6755399441208681)
init 1 6 init root 3w CHR 1,11 22799473113733058 /dev/kmsg
init 1 6 init root 0u CHR 1,3 19421773393205470 /dev/null
init 1 6 init root 1u CHR 1,3 19421773393205470 /dev/null
init 1 6 init root 2u CHR 1,3 19421773393205470 /dev/null
init 1 6 init root 4u CHR 10,50 10977524091885831 /dev/lxss
init 1 6 init root 5u unknown /unknown (stat: Operation not permitted)
init 1 6 init root 8u DIR 0,2 4096 7036874417901290 /
init 1 6 init root 9u sock 0,0 8 can't identify protocol
init 1 6 init root 10u unknown anon_inode (stat: Operation not permitted)
init 1 6 init root 6u unknown anon_inode (stat: Operation not permitted)
init 7 root cwd DIR 0,2 4096 7036874417901290 /

```

iotop

```

root@ICPL14580:/home# iotop
could not run iotop as some of the requirements are not met:
  Linux >= 2.6.20 with
  - I/O accounting support (CONFIG_TASKSTATS, CONFIG_TASK_DELAY_ACCT, CONFIG_TASK_IO_ACCOUNTING, kernel.task_delayacct sysctl)
  - VM event counters (CONFIG_VM_EVENT_COUNTERS)
root@ICPL14580:/home#

```

Df and du

```

root@ICPL14580:/home# df
Filesystem      1K-blocks      Used Available Use% Mounted on
rootfs          249179612 89884252 159295360  37% /
none            249179612 89884252 159295360  37% /dev
none            249179612 89884252 159295360  37% /run
none            249179612 89884252 159295360  37% /run/lock
none            249179612 89884252 159295360  37% /run/shm
none            249179612 89884252 159295360  37% /run/user
tmpfs           249179612 89884252 159295360  37% /sys/fs/cgroup
C:\             249179612 89884252 159295360  37% /mnt/c
root@ICPL14580:/home# du
0      ./hiddendir
0      ./archivepractice/examplendir
4      ./archivepractice
8      ./bob
0      ./dir3
0      ./log
8      ./logdir
0      ./myfolder
0      ./new_dir
0      ./sampledir/subsampledir
0      ./sampledir
0      ./sampledir2
0      ./sampledir3
96     .

```

W

```

root@ICPL14580:/home# w
14:00:30 up 43 min,  0 user,  load average: 0.52, 0.58, 0.59
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
root@ICPL14580:/home#

```

Last

```

root@ICPL14580:/home# last

wtmp begins Fri Oct 25 08:00:52 2024
root@ICPL14580:/home#

```

Tail

```
root@ICPL14580:/home/logdir# tail -n 5 logfile.log
2024-06-17 10:40:00 INFO [process-monitor] Process started: PID=1060, name=nginx.
2024-06-17 10:45:30 INFO [auth-service] User login: username=david, status=success.
2024-06-17 10:50:00 WARN [disk-space] Disk usage at 92% on /dev/sda1.
2024-06-17 10:55:23 ERROR [process-monitor] Process crash detected: PID=1060, name=nginx.
2024-06-17 11:00:01 INFO [system] System health check completed: status=ok.
root@ICPL14580:/home/logdir#
```

Head

```
root@ICPL14580:/home/logdir# head -n 5 logfile.log
2024-06-17 10:00:01 INFO [system] System boot completed successfully.
2024-06-17 10:05:23 INFO [user-service] User login: username=alice, status=success.
2024-06-17 10:06:10 ERROR [auth-service] Failed login attempt: username=bob, reason=invalid-password.
2024-06-17 10:06:30 INFO [network] Network connection established: eth0, IP=192.168.1.100.
2024-06-17 10:08:45 WARN [disk-space] Disk usage at 85% on /dev/sda1.
root@ICPL14580:/home/logdir#
```

Grep

```
root@ICPL14580:/home/logdir# grep "error" logfile.log
2024-06-17 10:12:05 ERROR [backup-service] Backup job failed: job_id=backup_001, reason=read-error.
root@ICPL14580:/home/logdir#
```

Less

```
root@ICPL14580:/home/logdir# less logfile.log
2024-06-17 10:00:01 INFO [system] System boot completed successfully.
2024-06-17 10:05:23 INFO [user-service] User login: username=alice, status=success.
2024-06-17 10:06:10 ERROR [auth-service] Failed login attempt: username=bob, reason=invalid-password.
2024-06-17 10:06:30 INFO [network] Network connection established: eth0, IP=192.168.1.100.
2024-06-17 10:08:45 WARN [disk-space] Disk usage at 85% on /dev/sda1.
2024-06-17 10:09:01 INFO [system] Scheduled backup started: job_id=backup_001.
2024-06-17 10:12:05 ERROR [backup-service] Backup job failed: job_id=backup_001, reason=read-error.
2024-06-17 10:15:45 INFO [user-service] User logout: username=alice.
2024-06-17 10:20:01 INFO [process-monitor] Process started: PID=1023, name=httpd.
2024-06-17 10:22:33 INFO [process-monitor] Process started: PID=1045, name=mysql.
2024-06-17 10:25:12 ERROR [process-monitor] Process crash detected: PID=1045, name=mysql.
2024-06-17 10:28:56 INFO [auth-service] User login: username=charlie, status=success.
2024-06-17 10:30:00 WARN [memory-monitor] Memory usage at 90%.
2024-06-17 10:35:15 INFO [system] Cleanup task completed.
2024-06-17 10:36:40 INFO [network] Network connection lost: eth0.
2024-06-17 10:37:01 ERROR [network] Failed to reconnect: eth0, reason=timeout.
2024-06-17 10:40:00 INFO [process-monitor] Process started: PID=1060, name=nginx.
2024-06-17 10:45:30 INFO [auth-service] User login: username=david, status=success.
2024-06-17 10:50:00 WARN [disk-space] Disk usage at 92% on /dev/sda1.
2024-06-17 10:55:23 ERROR [process-monitor] Process crash detected: PID=1060, name=nginx.
2024-06-17 11:00:01 INFO [system] System health check completed: status=ok.
logfile.log (END)
```

Cat

```
root@ICPL14580:/home/logdir# cat logfile.log
2024-06-17 10:00:01 INFO [system] System boot completed successfully.
2024-06-17 10:05:23 INFO [user-service] User login: username=alice, status=success.
2024-06-17 10:06:10 ERROR [auth-service] Failed login attempt: username=bob, reason=invalid-password.
2024-06-17 10:06:30 INFO [network] Network connection established: eth0, IP=192.168.1.100.
2024-06-17 10:08:45 WARN [disk-space] Disk usage at 85% on /dev/sda1.
2024-06-17 10:09:01 INFO [system] Scheduled backup started: job_id=backup_001.
2024-06-17 10:12:05 ERROR [backup-service] Backup job failed: job_id=backup_001, reason=read-error.
2024-06-17 10:15:45 INFO [user-service] User logout: username=alice.
2024-06-17 10:20:01 INFO [process-monitor] Process started: PID=1023, name=httpd.
2024-06-17 10:22:33 INFO [process-monitor] Process started: PID=1045, name=mysql.
2024-06-17 10:25:12 ERROR [process-monitor] Process crash detected: PID=1045, name=mysql.
2024-06-17 10:28:56 INFO [auth-service] User login: username=charlie, status=success.
2024-06-17 10:30:00 WARN [memory-monitor] Memory usage at 90%.
2024-06-17 10:35:15 INFO [system] Cleanup task completed.
2024-06-17 10:36:40 INFO [network] Network connection lost: eth0.
2024-06-17 10:37:01 ERROR [network] Failed to reconnect: eth0, reason=timeout.
2024-06-17 10:40:00 INFO [process-monitor] Process started: PID=1060, name=nginx.
2024-06-17 10:45:30 INFO [auth-service] User login: username=david, status=success.
2024-06-17 10:50:00 WARN [disk-space] Disk usage at 92% on /dev/sda1.
2024-06-17 10:55:23 ERROR [process-monitor] Process crash detected: PID=1060, name=nginx.
2024-06-17 11:00:01 INFO [system] System health check completed: status=ok.
root@ICPL14580:/home/logdir#
```

Archiving and Compression

tar -cf backup.tar /home/user/documents

tar -xf backup.tar

gzip file.txt

gunzip file.txt.gz

zip archive.zip file1.txt file2.txt

unzip archive.zip

xz largefile

unxz largefile.xz

tar -czf backup.tar.gz /var/log

tar -xzf backup.tar.gz

zip -r project.zip /home/user/project

xz log1.log log2.log

tar -xzf backup.tar.gz file1 file2

To sync and compress files for remote backup using rsync and gzip

`rsync -avz /source/path/ user@remote:/destination/path/`

The `-z` flag compresses data during transfer, saving bandwidth.

Time

```
root@ICPL14580:/home/logdir# time

real    0m0.000s
user    0m0.000s
sys     0m0.000s
root@ICPL14580:/home/logdir#
```

Uname

```
root@ICPL14580:/home/logdir# uname -a
Linux ICPL14580 4.4.0-19041-Microsoft #4355-Microsoft Thu Apr 12 17:37:00 PST 2024 x86_64 x86_64 x86_64 GNU/Linux
```

Hostname

```
root@ICPL14580:/home/logdir# uname -a
Linux ICPL14580 4.4.0-19041-Microsoft #4355-Microsoft Thu Apr 12 17:37:00 PST 2024 x86_64 x86_64 x86_64 GNU/Linux
root@ICPL14580:/home/logdir# hostname
ICPL14580
```

Env

```
real    0m0.000s
user    0m0.000s
sys      0m0.000s
root@ICPL14580:/home/logdir# uname -a
Linux ICPL14580 4.4.0-19041-Microsoft #4355-Microsoft Thu Apr 12 17:37:00 PST 2024 x86_64 x86_64 x86_64 GNU/Linux
root@ICPL14580:/home/logdir# hostname
ICPL14580
root@ICPL14580:/home/logdir# env
SHELL=/bin/bash
WSL_DISTRO_NAME=Ubuntu
NAME=ICPL14580
PWD=/home/logdir
LOGNAME=root
HOME=/root
LANG=C, UTF-8
LS_COLORS=rs=0:di=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33;01:cd=40;33;01:or=40;31;01:mi=00:su=37;41:sg=30;43:ca=00:tw=30;42:ow=34;42:st=37;44:ex=01;32:*.ta
r=01;31:*.tgz=01;31:*.arc=01;31:*.arj=01;31:*.taz=01;31:*.lha=01;31:*.lzh=01;31:*.lz4=01;31:*.lzh=01;31:*.lзма=01;31:*.tlz=01;31:*.txz=01;31:*.tzo=01;31:*.t7z=01;31:*.zip=01;31:*.z=01;
31:*.dz=01;31:*.gz=01;31:*.lrz=01;31:*.lz=01;31:*.lzo=01;31:*.xz=01;31:*.zst=01;31:*.tzst=01;31:*.bz2=01;31:*.bz=01;31:*.tbz2=01;31:*.tbz=01;31:*.deb=01;31:*.rpm
=01;31:*.jar=01;31:*.war=01;31:*.ear=01;31:*.sar=01;31:*.rar=01;31:*.alz=01;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31:*.7z=01;31:*.rz=01;31:*.cab=01;31:*.wim=01;31:*.swm=01;3
1:*.dwm=01;31:*.esd=01;31:*.avif=01;35:*.jpg=01;35:*.jpeg=01;35:*.mjpg=01;35:*.mjpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm=01;35:*.ppm=01;35:*.tga=01;35:*.xbm=01;
35:*.xpm=01;35:*.tif=01;35:*.tiff=01;35:*.png=01;35:*.svg=01;35:*.svgz=01;35:*.mng=01;35:*.pcx=01;35:*.mov=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=01;35:*.webm=01;
35:*.webp=01;35:*.ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=01;35:*.qt=01;35:*.nuv=01;35:*.wmv=01;35:*.asf=01;35:*.rm=01;35:*.rmvb=01;35:*.flc=01;35:*.avi=01;35:
*.fli=01;35:*.flv=01;35:*.gl=01;35:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.cgm=01;35:*.emf=01;35:*.ogv=01;35:*.ogx=01;35:*.aac=00;36:*.au=00;36:*.flac=00;36:*.m4a=
00;36:*.mid=00;36:*.midi=00;36:*.mka=00;36:*.mp3=00;36:*.mpc=00;36:*.ogg=00;36:*.ra=00;36:*.wav=00;36:*.oga=00;36:*.opus=00;36:*.spx=00;36:*.xspf=00;36:*=00;90:*=00;90:*.
bak=00;90:*.crdownload=00;90:*.dpg=00;90:*.dpg-dist=00;90:*.dpg-new=00;90:*.dpg-old=00;90:*.dpg-tmp=00;90:*.old=00;90:*.orig=00;90:*.part=00;90:*.rej=00;90:*.rpmnew=00;90:*.rpmorig
=00;90:*.rpmsave=00;90:*.swp=00;90:*.tmp=00;90:*.ucf-dist=00;90:*.ucf-new=00;90:*.ucf-old=00;90:
LESSCLOSE=/usr/bin/lesspipe %s %s
TERM=xterm-256color
LESSOPEN=| /usr/bin/lesspipe %s
USER=root
SHLVL=1
WSLENV=
XDG_DATA_DIRS=/usr/local/share:/usr/share:/var/lib/flatpak/desktop
PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/mnt/c/Windows/system32:/mnt/c/Windows:/mnt/c/Windows/System32/Wbem:/mnt/c/Win
dows/System32/WindowsPowerShell/v1.0:/mnt/c/Windows/System32/OpenSSH:/mnt/c/Program Files/dotnet:/mnt/c/Users/koteswararao.b/AppData/Local/Microsoft/WindowsApps:/mnt/c/U
sers/koteswararao.b/AppData/Local/Programs/Git/cmd:/snap/bin
HOSTTYPE=x86_64
_=/usr/bin/env
OLDPWD=/home
```