

```
20:28:31 nicholas@yel1
tmux-borders
tmux-bsdauth
tmux-cfgcurr.
tmux-imsg-12
tmux-imsg1.d
tmux-imsg2.d
tmux-modesea
nicholas@yel1

WAIT    TIME      CPU COMMAND
poll    0:06  0.00% mpd
poll    1:34  0.00% mpd
poll    0:00  0.00% mpd
poll    0:00  0.00% scmpc
kqread
select  0:00  0.00% apmd
select  0:00  0.00% httpd
select  0:00  0.00% sendmail
poll    0:01  0.00% logfmon
select  0:02  0.00% sshd
nfsd   0:02  0.00% nfssd
nfssd  0:01  0.00% nfssd
poll    0:00  0.00% tmux
select  0:00  0.00% cron
ttyin
0:00  0.00% ksh
poll    0:00  0.00% syslogd
poll    0:00  0.00% ncmpc
select  0:00  0.00% emacs

client_ctx *cctx)
t client_ctx *cctx)

NULL, 0);

x)

);

NULL, 0);

) Hg-0 (Diff)-----
```

5:ksh 6:ksh 7:ksh 8:ksh* 9:ksh 10:ksh 11:ksh

CHMOD

PROCESS UTILITIES

DISK UTILITIES

by sahitya

File and Directory Permissions with CHMOD

The CHMOD command controls who can read, write and execute files and directories.

chmod [OPTIONS] PERMISSIONS FILE/DIRECTORY

- **OPTIONS:** Optional flags that modify the behavior of the `chmod` command.
- **PERMISSIONS:** The permissions you want to set, typically expressed as a three-digit octal number or a symbolic representation.
- **FILE/DIRECTORY:** The file or directory for which you want to change permissions.

Octal Notation:

Octal notation represents permissions using three digits: owner, group, and others. Each digit is a combination of three bits, where:

- 4 stands for read permission (r).
- 2 stands for write permission (w).
- 1 stands for execute permission (x).
- 0 represents no permission.

Symbolic Notation:

Symbolic notation allows you to modify permissions using letters and symbols. The format is as follows:

- `u` for the user (owner)
- `g` for the group
- `o` for others
- `a` for all (equivalent to `ugo`)
- `+` to add permissions
- `-` to remove permissions
- `=` to set permissions explicitly

Here are some common ways to use the `chmod` command and examples of those command executions with their output:

Octal

Notation:

```
chmod 644 example.txt
```

The owner can read and write, while the group and others can only read the file.

Symbolic

Notation:

```
chmod g+x my_directory
```

In this case, the owner can read and write, while the group and others can only read the file.

Combining

Permissions:

```
chmod o-w,u+g+xmyscript.sh
```

This command adds execute permission to the group for the directory.

Recursive

Mode:

```
chmod -R 644 my_folder
```

This command will apply the specified permissions to all files and sub-directories within "my_folder."



Made with Gamma

Process Status: PS

The PS command displays information about running processes making it easy to manage and monitor processes:

Syntax

`ps [options]`

Options

- `-e`: Display all processes.
- `-f`: Display full-format listing.

Example

Display information about all processes in full format.

```
| ps -ef
```

```
rtt min/avg/max/mdev = 540.528/540.528/540.528/0.000 ms
[root@localhost ~]# pwd
/root
[root@localhost ~]# cd /var
[root@localhost var]# ls -la
total 72
drwxr-xr-x. 18 root root 4096 Jul 30 22:43 .
drwxr-xr-x. 23 root root 4096 Sep 14 20:42 ..
drwxr-xr-x. 2 root root 4096 May 14 00:15 account
drwxr-xr-x. 11 root root 4096 Jul 31 22:26 cache
drwxr-xr-x. 3 root root 4096 May 18 16:03 db
drwxr-xr-x. 3 root root 4096 May 18 16:03 games
drwxrwx--T. 2 root gdm 4096 Jun 2 18:39 gdm
drwxr-xr-x. 38 root root 4096 May 18 16:03 lib
drwxr-xr-x. 2 root root 4096 May 18 16:03 local
lrwxrwxrwx. 1 root root 11 May 14 00:12 lock -> ../../run/lock
drwxr-xr-x. 14 root root 4096 Sep 14 20:42 mail -> spool/mail
drwxrwxrwx. 1 root root 10 Jul 30 22:43 mail -> spool/mail
drwxr-xr-x. 2 root root 4096 May 18 16:03 nis
drwxr-xr-x. 2 root root 4096 May 18 16:03 opt
drwxr-xr-x. 2 root root 4096 May 18 16:03 preserve
drwxr-xr-x. 2 root root 4096 Jul 1 22:11 report
lrwxrwxrwx. 1 root root 6 May 14 00:12 run -> ../../run
drwxr-xr-x. 14 root root 4096 May 18 16:03 spool
drwxrwxrwt. 4 root root 4096 Sep 12 23:50 tmp
drwxr-xr-x. 2 root root 4096 May 18 16:03 yp
[root@localhost var]# yum search wiki
Loaded plugins: langpacks, presto, refresh-packagekit, remove-with-leaves
rpmfusion-free-updates
rpmfusion-free-updates/primary_db
rpmfusion-nonfree-updates
```

Dynamic Process Viewer: Top

The TOP command provides a real-time view of system processes. Here's how to use it:

1 Syntax

2 Options

3 Example

- -p PID: Monitor a specific process by PID.

Display processes sorted by CPU usage.

2.7 kB	00:00
206	Made with Gamma
2.7 kB	00:00

Interactive Process Viewer: Htop

An improved alternative to the TOP command, the HTOP command has increased functionality and offers an intuitive user interface.

1

Syntax

```
htop
```

2

Example

View and interact with running processes.



Made with Gamma

Terminate Processes: Kill

Use the KILL command to terminate processes by sending signals:

Syntax

```
kill [signal] PID
```

Options

- -9 or SIGKILL: Forcefully terminate a process.

Example

```
kill -9 1234
```

Terminate a process with PID 1234.



Made with Gamma

Process ID Lookup: Pgrep

Find the process ID using the PGREP command:

Syntax

```
pgrep [options] pattern
```

Example

```
pgrep apache2
```

Finds the PID of a process named "apache2"

Signal Processes: Pkill

The PKILL command sends signals to processes based on their names.

Syntax

```
pkill [options] pattern
```

Example

Terminate all processes with the name "myapp."

```
| pkill -9 myapp
```

Set Process Priority: Nice

The NICE command launches processes with a specified priority level:

Syntax:

 nice [options] command

Options:

 -n N: Set the niceness (priority) level of a process.

Example:

 Launch a CPU-intensive process with lower priority.

```
| nice -n 10 ./my_cpu_intensive_task
```

Disk Usage: Du

```
196 ./ns-allinone-3.30.1/ns-3.30.1/src/csma-layout
192 ./ns-allinone-3.30.1/ns-3.30.1/src/traffic-control/test
64 ./ns-allinone-3.30.1/ns-3.30.1/src/traffic-control/helper
108 ./ns-allinone-3.30.1/ns-3.30.1/src/traffic-control/doc
296 ./ns-allinone-3.30.1/ns-3.30.1/src/traffic-control/model
108 Determine file and directory space usage using the DU command.
968 ./ns-allinone-3.30.1/ns-3.30.1/src/traffic-control/examples
1744 ./ns-allinone-3.30.1/ns-3.30.1/src/traffic-control/bindings
20 ./ns-allinone-3.30.1/ns-3.30.1/src/traffic-control
128 ./ns-allinone-3.30.1/ns-3.30.1/src/mpi/doc
72 ./ns-allinone-3.30.1/ns-3.30.1/src/mpi/examples
488 ./ns-allinone-3.30.1/ns-3.30.1/src/mpi/bindings
716 ./ns-allinone-3.30.1/ns-3.30.1/src/mpi
8 • -h or --human-readable: Display sizes in human-readable format.
16 • -s or --summarize: Display only the total size.
32 ./ns-allinone-3.30.1/ns-3.30.1/src/tap-bridge/doc
88 ./ns-allinone-3.30.1/ns-3.30.1/src/tap-bridge/helper
64 ./ns-allinone-3.30.1/ns-3.30.1/src/tap-bridge/model
636 ./ns-allinone-3.30.1/ns-3.30.1/src/tap-bridge/examples
852 ./ns-allinone-3.30.1/ns-3.30.1/src/tap-bridge/bindings
60 ./ns-allinone-3.30.1/ns-3.30.1/src/point-to-point-layout/model
1136 ./ns-allinone-3.30.1/ns-3.30.1/src/point-to-point-layout/bindings
1204 ./ns-allinone-3.30.1/ns-3.30.1/src/point-to-point-layout
```

Options

Syntax

2

Example

3

Display total disk space used in the current directory and its subdirectories in human-readable format.

Disk Space: Df

View file system disk space information using the DF command.

1 Syntax

```
df [options]
```

2 Options

- -h: Display sizes in human-readable format.
- -T: Display file system type.

3 Example

```
Display detailed file  
system usage for all  
mounted file systems.
```

```
adminubuntu@adminubuntu-HP-Pro-Tower-280-G9-PCI-Desktop-PC:~/Documents$ df  
Filesystem      1K-blocks    Used Available Use% Mounted on  
tmpfs            781808     2512    779296   1% /run  
/dev/nvme0n1p4  100205640 25080688  69988568  27% /  
tmpfs            3909032       0    3909032   0% /dev/shm  
tmpfs             5120        4      5116   1% /run/lock  
/dev/nvme0n1p1    98304     72696    25608  74% /boot/efi  
tmpfs            781804     112    781692   1% /run/user/1000
```



A close-up photograph of a liquid surface with intricate, wavy patterns in shades of blue, purple, and white. The lighting highlights the ripples and reflections on the dark, viscous liquid.

THANK YOU