



Exploring Disk and Process Commands

Welcome to our presentation on disk and process commands! In this guide, we'll dive into powerful commands like `df`, `du`, `ps`, and more.

Disk Commands

df

The df command is your gateway to understanding file system disk space usage. Discover how much space is used and available.

du

Estimate file space usage with du. Uncover the size of directories and files, helping you manage them more effectively.

free

Memory is vital. Use the free command to analyze the amount of free and used system memory, ensuring optimal performance.

Syntax

Syntax of du :

```
du [options] [directory/file]
```

Syntax of df :

```
df [OPTION]... [FILE]...
```

Syntax of free :

```
free [OPTION]
```

Process Commands

```
CPU: [|||||||||||||||||||||||||||||||||||||] 100.0% Tasks: 46, 44 thr: 4 running
Mem: [|||||||||||||||||||||||||||||||||] 61/200MB Load average: 1.38 1.67 1.64
Swap: [|||||||||] 0/2047MB Uptime: 03:05:15

ps -eo pid,ppid,uid,rss,vsz,shss,%cpu,%mem,cmd
```

| | pid | ppid | uid | rss | vsz | shss | %cpu | %mem | cmd | |
|-------|------------|------|-----|-------|-------|-------|------|------|---|--------------------------------------|
| 1639 | root | 20 | 0 | 42328 | 940 | 404 | 5 | 100 | 0.0 2521:23 echo "find" | |
| 26709 | root | 20 | 0 | 42328 | 940 | 404 | 5 | 72.8 | 0.0 0:05.96 echo "find" | |
| 26710 | root | 20 | 0 | 42328 | 940 | 404 | 5 | 72.8 | 0.0 0:05.87 echo "find" | |
| 26879 | andreas | ga | 20 | 26152 | 3940 | 2936 | 1 | 0.2 | 0:01.36 top | |
| 26881 | nobody | 20 | 0 | 4440 | 9548 | 8460 | 5 | 0.0 | 0.5 0:00.03 Passenger ust-router | |
| 1095 | mysql | 20 | 0 | 741M | 92588 | 11048 | 5 | 0.0 | 4.5 0:14.45 /usr/sbin/mysqld | |
| 1654 | root | 20 | 0 | 42328 | 940 | 404 | 5 | 0.0 | 0.0 0:06.53 echo "find" | |
| 1344 | mysql | 20 | 0 | 741M | 92588 | 11048 | 5 | 0.0 | 4.5 0:01.80 /usr/sbin/mysqld | |
| 1 | root | 20 | 0 | 33468 | 3828 | 2712 | 5 | 0.0 | 0.2 0:03.67 /sbin/init | |
| 1325 | mysql | 20 | 0 | 741M | 92588 | 11048 | 5 | 0.0 | 4.5 0:00.46 /usr/sbin/mysqld | |
| 2473 | andreas | ga | 20 | 0 | 103M | 5104 | 4024 | 5 | 0.0 | 0.2 0:01.12 shd: andreas.galll@pts/0 |
| 1323 | mysql | 20 | 0 | 741M | 92588 | 11048 | 5 | 0.0 | 4.5 0:00.55 /usr/sbin/mysqld | |
| 1322 | mysql | 20 | 0 | 741M | 92588 | 11048 | 5 | 0.0 | 4.5 0:00.44 /usr/sbin/mysqld | |
| 1348 | mysql | 20 | 0 | 741M | 92588 | 11048 | 5 | 0.0 | 4.5 0:01.13 /usr/sbin/mysqld | |
| 1319 | mysql | 20 | 0 | 741M | 92588 | 11048 | 5 | 0.0 | 4.5 0:00.57 /usr/sbin/mysqld | |
| 1653 | root | 20 | 0 | 42328 | 940 | 404 | 5 | 0.0 | 0.0 0:00.96 echo "find" | |
| 25843 | root | 20 | 0 | 150M | 8244 | 7236 | 5 | 0.0 | 0.4 0:00.03 Passenger watchdog | |
| 25846 | root | 20 | 0 | 572M | 9552 | 8456 | 5 | 0.0 | 0.5 0:00.03 Passenger core | |
| 25857 | root | 20 | 0 | 342M | 26284 | 20008 | 5 | 0.0 | 1.3 0:00.08 /usr/sbin/apache2 -k start | |
| 25848 | root | 20 | 0 | 572M | 9552 | 8456 | 5 | 0.0 | 0.5 0:00.01 Passenger core | |
| 1318 | mysql | 20 | 0 | 741M | 92588 | 11048 | 5 | 0.0 | 4.5 0:00.41 /usr/sbin/mysqld | |
| 1320 | mysql | 20 | 0 | 741M | 92588 | 11048 | 5 | 0.0 | 4.5 0:00.60 /usr/sbin/mysqld | |
| 2170 | root | 20 | 0 | 103M | 6528 | 5448 | 5 | 0.0 | 0.3 0:00.07 shd: andreas.galll [priv] | |
| 1324 | mysql | 20 | 0 | 741M | 92588 | 11048 | 5 | 0.0 | 4.5 0:00.43 /usr/sbin/mysqld | |
| 1326 | mysql | 20 | 0 | 741M | 92588 | 11048 | 5 | 0.0 | 4.5 0:00.38 /usr/sbin/mysqld | |
| 1586 | clamav | 20 | 0 | 54668 | 5892 | 4512 | 5 | 0.0 | 0.3 0:14.22 /usr/bin/freshclam -d --quiet | |
| 291 | root | 20 | 0 | 19744 | 1968 | 1700 | 5 | 0.0 | 0.1 0:00.10 upstart-udev-bridge --daemon | |
| 300 | root | 20 | 0 | 51448 | 3540 | 2856 | 5 | 0.0 | 0.2 0:00.18 /lib/systemd/systemd-udev --daemon | |
| 407 | root | 20 | 0 | 15412 | 1612 | 1212 | 5 | 0.0 | 0.1 0:00.04 upstart-file-bridge --daemon | |
| 454 | messagebus | 20 | 0 | 39232 | 2280 | 1896 | 5 | 0.0 | 0.1 0:00.04 dbus-daemon --system --fork | |
| 468 | syslog | 20 | 0 | 249M | 2868 | 2336 | 5 | 0.0 | 0.1 0:00.02 rsyslogd | |
| 469 | syslog | 20 | 0 | 249M | 2868 | 2336 | 5 | 0.0 | 0.1 0:00.00 rsyslogd | |
| 470 | syslog | 20 | 0 | 249M | 2868 | 2336 | 5 | 0.0 | 0.1 0:00.02 rsyslogd | |
| 458 | syslog | 20 | 0 | 249M | 2868 | 2336 | 5 | 0.0 | 0.1 0:00.08 rsyslogd | |
| 496 | root | 20 | 0 | 15264 | 204 | 0 | 5 | 0.0 | 0.0 0:00.02 upstart-socket-bridge --daemon | |
| 520 | root | 20 | 0 | 43452 | 3216 | 2836 | 5 | 0.0 | 0.2 0:00.01 /lib/systemd/systemd-logind | |
| 649 | root | 20 | 0 | 10232 | 3828 | 1004 | 5 | 0.0 | 0.2 0:00.00 dhclient -l -w -p /run/dhclient.eth0.pid -f /var/lib/dhclient/eth0.leases | |
| 876 | root | 20 | 0 | 15820 | 2192 | 2040 | 5 | 0.0 | 0.1 0:00.00 /sbin/getty -S 38400 tty4 | |
| 879 | root | 20 | 0 | 15820 | 2128 | 1976 | 5 | 0.0 | 0.1 0:00.00 /sbin/getty -S 38400 tty5 | |

ps

Gain insight into your system's processes with ps. Take a snapshot of running programs and identify resource usage like a pro.

```
root@AJT: /home/demon

/demon# kill -l

 2) SIGINT      3) SIGQUIT     4) SIGILL      5) SIGTRAP
 7) SIGBUS      8) SIGFPE     9) SIGKILL     10) SIGUSR1
12) SIGUSR2     13) SIGPIPE    14) SIGALRM     15) SIGTSTP
17) SIGCHLD     18) SIGCONT    19) SIGSTOP     20) SIGTTOU
22) SIGTTOU     23) SIGURG     24) SIGXCPU     25) SIGXFSZ
27) SIGPROF     28) SIGWINCH   29) SIGIO       30) SIGPWR
34) SIGRTMIN     35) SIGRTMIN+1 36) SIGRTMIN+2 37) SIGRTMIN+3
39) SIGRTMIN+5  40) SIGRTMIN+6 41) SIGRTMIN+7 42) SIGRTMIN+8
44) SIGRTMIN+10 45) SIGRTMIN+11 46) SIGRTMIN+12 47) SIGRTMIN+13
49) SIGRTMIN+15 50) SIGRTMAX-14 51) SIGRTMAX-13 52) SIGRTMAX-12
54) SIGRTMAX-10 55) SIGRTMAX-9  56) SIGRTMAX-8  57) SIGRTMAX-7
59) SIGRTMAX-5  60) SIGRTMAX-4 61) SIGRTMAX-3 62) SIGRTMAX-2
64) SIGRTMAX

/demon#
```

kill

Terminate or signal unruly processes with the powerful kill command. Regain control and ensure a smooth-running system.

Understanding the ps Command

The `ps` command is a powerful tool used in Unix-like operating systems to display information about running processes. It provides a snapshot of the current processes running on your system, including their process IDs (PIDs), parent PIDs, CPU and memory usage, and other details.

The `ps` command has various options that allow you to customize the output and filter the processes based on different criteria. For example, you can use the `-e` option to display information about all processes on the system, or the `-u` option to show processes owned by a specific user.

Using the `ps` command can help you monitor and manage your system's resources, identify resource-intensive processes, troubleshoot issues, and more.

Let me know if you need any further information or if there's anything specific you'd like to know about the `ps` command!

Syntax : `ps [option]`

```
drwxr-xr-x.  3 root root 4096 May 18 16:03 empty
drwxr-xr-x.  2 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 log
lrwxrwxrwx.  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
```

KILL

Terminate or signal unruly processes with the powerful kill command. Regain control and ensure a smooth-running system.

Syntax : kill [signal] PID