

# Kill zombie processes in Linux

Check zombie processes with the top command

```
root@hetz-root ~ $ top
top - 09:45:34 up 387 days, 18:39,  1 user,  load average: 2.77, 2.48, 2.52
Tasks: 722 total,  1 running, 720 sleeping,  0 stopped,  1 zombie
%Cpu(s): 11.3 us,  0.8 sy,  0.0 ni, 87.8 id,  0.1 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem : 64206.6 total,  716.8 free, 25416.5 used, 38073.4 buff/cache
MiB Swap: 32735.0 total, 23542.4 free,  9192.6 used. 37560.7 avail Mem
```

| PID     | USER     | PR | NI | VIRT    | RES    | SHR    | S | %CPU | %MEM | TIME+     | COMMAND         |
|---------|----------|----|----|---------|--------|--------|---|------|------|-----------|-----------------|
| 1151103 | albert.+ | 20 | 0  | 20.0g   | 5.2g   | 199840 | S | 90.4 | 8.3  | 133577:15 | firefox-bin     |
| 1090115 | albert.+ | 20 | 0  | 6008644 | 127716 | 75680  | S | 23.8 | 0.2  | 42017:34  | gnome-shell     |
| 1089895 | albert.+ | 20 | 0  | 705784  | 212436 | 171296 | S | 11.9 | 0.3  | 18713:47  | Xorg            |
| 2179284 | root     | 20 | 0  | 6302568 | 702380 | 58880  | S | 5.0  | 1.1  | 4256:02   | k3s-server      |
| 476336  | pcommer+ | 20 | 0  | 2524128 | 294304 | 68948  | S | 3.3  | 0.4  | 202:51.75 | jupyter-lab     |
| 1264742 | albert.+ | 20 | 0  | 2508288 | 60484  | 50704  | S | 3.3  | 0.1  | 5787:55   | Isolated Web Co |

Check Linux distrubtion

```
root@hetz-root ~ $ cat /etc/lsb-release
DISTRIB_ID=Ubuntu
DISTRIB_RELEASE=22.04
DISTRIB_CODENAME=jammy
DISTRIB_DESCRIPTION="Ubuntu 22.04.3 LTS"
root@hetz-root ~ $
```

Linux command and output

Check amount of zombie processes with the top command (see second line below)

```
top - 09:38:14 up 387 days, 18:32,  1 user,  load average: 2.12, 2.38, 2.57
Tasks: 717 total,  2 running, 714 sleeping,  0 stopped,  1 zombie
%Cpu(s): 19.6 us,  1.2 sy,  0.0 ni, 79.2 id,  0.1 wa,  0.0 hi,  0.0 si,  0.0 st
```

#####

Find the zombie processes

```
root@hetz-root ~ $ ps -A -ostat,pid,ppid | grep -e '[zZ]'
```

Zs 3379981 2279581

```
root@hetz-root ~ $ ps -ef | grep 2279581
```

```
5050  2279581 2279435 0 Mar19 ?      00:46:55 /venv/bin/python3 /venv/bin/gunicorn --limit-request-line
8190 --timeout 86400 --bind [::]:80 -w 1 --threads 25 --access-logfile - -c gunicorn_config.py run_pgadmin:app
5050  3379981 2279581 0 Sep02 ?      00:00:00 [python3] <defunct>
```

```
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root@hetz-root ~ $ ps -ef | grep 3379981 | grep -v grep
5050  3379981 2279581 0 Sep02 ?      00:00:00 [python3] <defunct>
```

#####

Kill the zombie process

```
root@hetz-root ~ $ kill -9 2279581
root@hetz-root ~ $ ps -ef | grep 3379981 | grep -v grep
root@hetz-root ~ $ ps -A -ostat,pid,ppid | grep -e '[zZ]'
```

#####

Check for zombie processes again

```
top - 09:47:10 up 387 days, 18:41, 1 user, load average: 2.64, 2.50, 2.52
Tasks: 712 total, 1 running, 711 sleeping, 0 stopped, 0 zombie
%Cpu(s): 10.8 us, 1.9 sy, 0.0 ni, 87.3 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
```

Links:

<https://www.linuxjournal.com/content/how-kill-zombie-processes-linux>

<https://www.baeldung.com/linux/clean-zombie-process>

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