

# Tips and tricks

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# Linux

# 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>
```

```
-----

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>