nethogs Bandwidth per process

START HERE

`sudo` **nethogs**
Bandwidth per process

s
Sort by sent

`sudo` **nethogs** *<if>*
Watch one interface

`sudo` **nethogs -d 5**
Refresh every 5 s

m
Cycle units and totals

`sudo` **nethogs -t**
Plain text output

r
Sort by received

q
Quit

CONCEPTS

nethogs groups traffic by process, not by host or port. It reads packets with libpcap and matches connections to PIDs through /proc, so it is Linux only.

Packets libpcap
↓ match
Connection socket inode
↓ /proc
Process PID, program
How a byte gets a name

Traffic it cannot tie to a process, such as short-lived connections, shows up as 'unknown TCP'. Ignore it unless it is large.

Use iftop to see which hosts talk, nethogs to see which program does.

RUN

`sudo` **nethogs**
Monitor all running interfaces

`sudo` **nethogs** *<if> <if>*
Monitor only these interfaces

`sudo` **nethogs -a**
Include loopback and down interfaces

`sudo` **nethogs -d** *<sec>*
Set refresh interval (default 1)

`sudo` **nethogs -c** *<n>*
Quit after n refreshes

`sudo` **nethogs -P** *<pid>*
Show only this process

RUN (cont.)

`sudo` **nethogs -f** *'<filter>'*
Apply a pcap filter (experimental)

`sudo` **nethogs -C**
Count UDP as well as TCP

`sudo` **nethogs -p**
Promiscuous capture (not advised)

`sudo` **nethogs -g** *<n>*
Prune dead entries every n refreshes

nethogs -V
Print version

nethogs -h
Print help

DISPLAY

-v 0
Rates in kB/s (default)

-v 1
Total kB

-v 2
Total bytes

-v 3
Total MB

-v 4
Rates in MB/s

-v 5
Rates in GB/s

-l
Show full command line

-b
Show program basename only

-s
Start sorted by sent

INTERACTIVE KEYS

q
Quit

r
Sort by received

s
Sort by sent

m
Cycle kB/s, kB, B, MB, MB/s, GB/s
The same set as the -v values.

l
Toggle full command line

b
Toggle program basename

Press Ctrl+C to quit as well (fixed in 0.9.0); on older builds use q.

OUTPUT

`sudo` **nethogs -t**
Trace mode: plain text, no curses

`sudo` **nethogs -t -c** *<n>*
Print n samples and exit

`sudo` **nethogs -t -d** *<sec>*
Trace with a custom interval

Trace mode prints one line per process and refresh: program/PID/UID, then sent and received. Good for logs and pipes.

PERMISSIONS

`sudo` **setcap "cap_net_admin, cap_net_raw, cap_dac_read_search, cap_sys_ptrace+pe" $(which nethogs)**
Allow non-root use
The first two capture packets; the last two let it read process names. Re-run after every upgrade.

getcap $(which nethogs)
Check granted capabilities

Packet capture needs root. A permissions error or missing process names usually means root or the capabilities below are absent.

RECIPES

Log per-process traffic for a minute

```
sudo nethogs -t -d 5 -c 12 > nethogs.log
```

Which program is eating the Wi-Fi

```
sudo nethogs wlan0
# press r to sort by received
# press m to switch to totals
```

Watch one service

```
pid=$(pidof firefox | cut -d' ' -f1)
sudo nethogs -P "$pid" -b
```

Non-root monitoring

```
sudo setcap "cap_net_admin,
cap_net_raw,
cap_dac_read_search,
cap_sys_ptrace+pe" /usr/sbin/
nethogs
nethogs eth0
```