

NAME

vnStat – a console-based network traffic monitor

SYNOPSIS

```
vnstat [ -Ddhlmqrstuvw? ] [ -i interface ] [ -tr time ] [ --cleartop ] [ --config file ] [ --days ] [
--debug ] [ --disable ] [ --dumpdb ] [ --enable ] [ --help ] [ --hours ] [ --iface interface ] [ --iflist
] [ --live ] [ --longhelp ] [ --months ] [ --nick nickname ] [ --query ] [ --rebuildtotal ] [ --reset ] [
--short ] [ --showconfig ] [ --sync ] [ --testkernel ] [ --top10 ] [ --traffic time ] [ --update ] [
--version ] [ --weeks ] [ --xml ]
```

DESCRIPTION

vnStat is a console-based network traffic monitor. It keeps a log of hourly, daily and monthly network traffic for the selected interface(s). However, it isn't a packet sniffer. The traffic information is analyzed from the **proc(5)** and **sys** filesystems depending on availability. That way vnStat can be used even without root permissions on most systems.

OPTIONS

- d, --days**
Show traffic for days.
- h, --hours**
Show traffic for the last 24 hours.
- m, --months**
Show traffic for months.
- s, --short**
Use short output mode. This mode is also used if more than one database is available.
- t, --top10**
Show all time top10 traffic days.
- w, --weeks**
Show traffic for 7 days, current and previous week.
- tr *time*** Calculate how much traffic goes through the selected interface during the given *time* seconds. The *time* will be 5 seconds if a number parameter isn't included.
- l, --live**
Display current transfer rate for the selected interface in real time until interrupted. Statistics will be shown after interruption if runtime was more than 10 seconds.
- i, --iface *interface***
Select one specific *interface* and apply actions to only it.
- iflist** Show list of currently available interfaces.
- q, --query**
Force database query mode.
- u, --update**
Update all enabled databases or only the one specified with **-i** parameter.
- r, --reset**
Reset the internal counters in the database for the selected interface. Use this if the interface goes down and back up, otherwise that interface will get some extra traffic to its database.
- sync** Synchronize internal counters in the database with interface counters for the selected interface. Use this if the system is rebooted but interface counters aren't reseted. Such can occur when suspend to ram/disk is used.
- enable, --disable**
Enable or disable updates for selected interface. Useful for interfaces that aren't always available, like ppp0. If the interface goes down it should be disabled in order to avoid errors. Add something like **vnstat -r --disable -i ppp0** to the script that's executed when the interface goes down and

vnstat --enable -i ppp0 to the up script.

-v, --version

Show current version.

--cleartop

Remove all top10 entries.

-.?, --help

Show a command summary.

--longhelp

Show complete options list.

--nick *nickname*

Set the selected interfaces *nickname* as an alias the will be displayed in queries. Usage of **-u** is required to save the change.

--config *file*

Use *file* as config file instead of using normal config file search function.

--rebuildtotal

Reset the total traffic counters and recount those using recorded months.

--testkernel

Test if the kernel boot time information always stays the same like it should or if it's shifting.

-D, --debug

Show additional debug output.

--xml Show database content for selected interface or all interfaces in xml format. All traffic values in the output are in KiB.

--dumpdb

Instead of showing the database with a formatted output, this output will dump the whole database in a format that should be easy to parse with most script languages. Use this for example with PHP, Perl or Python to make a custom webpage. The dump uses ; as field delimiter.

active;1	activity status
interface;eth0	name for the interface
nick;inet	nick (if given)
created;1023895272	creation date in Unix time
updated;1065467100	when the database was updated
totalrx;569605	all time total received MiB
totaltx;2023708	all time total transmitted MiB
currx;621673719	latest rx value in /proc
curtx;981730184	latest tx value in /proc
totalrxk;644	total rx KiB counter
totaltxk;494	total tx KiB counter
btime;1059414541	system boot time in Unix time

Then follows 30 lines like the following

```
d;0;1078696800;559;7433;68;557;1
```

where d = days, 0 = day number in database (0 is today), 1077314401 date in Unix time, 559 = rx MiB, 7433 = tx MiB, 68 = rx KiB, 557 = tx KiB and 1 tells that vnStat has filled this value and it is in use.

```
m;0;1078092000;48649;139704;527;252;1 (x12)
```

```
t;0;1078351200;5979;47155;362;525;1 (x10)
```

h;0;1078699800;118265;516545 (x24)

m = months, t = top10 and h = hours, all other fields are in the same order as in days except hours that doesn't have a separate KiB value. For hours the forth and fifth fields have values in KiB.

FILES

/var/lib/vnstat/

This directory contains all databases the program uses. Files are named according to the monitored interfaces.

/etc/vnstat.conf

Config file that will be used unless *\$HOME/.vnstatrc* exists. See **vnstat.conf(1)** for more information.

EXAMPLES

vnstat -u -i interface forces a database update for *interface* or creates the database if it doesn't exist. This is usually the first command used after a fresh install.

vnstat -u -i interface --nick nick gives *interface* the nickname *nick* and that information will be later included with queries.

vnstat -u -r --disable -i interface resets the internal counters of *interface* and disables it from being updated before enabled again with the **--enable** parameter. This feature is especially useful for interfaces like *ppp0* that aren't always active.

RESTRICTIONS

Updates needs to be executed at least as often as it is possible for the interface to generate enough traffic to wrap the kernel interface traffic counter. Otherwise it is possible that some traffic won't be seen. This isn't an issue for 64 bit kernels but at least one update every hour is always required in order to provide proper input. With 32 bit kernels the maximum time between two updates depends on how fast the interface can transfer 4 GiB. Calculated theoretical times are:

10 Mbit:	54 minutes
100 Mbit:	5 minutes
1000 Mbit:	30 seconds

However, for 1000 Mbit interfaces updating once every minute is usually a working solution.

Estimated traffic values are likely to be somewhat inaccurate if daily traffic is low because only the MiB counter is used to calculate the estimate.

Virtual and aliased interfaces cannot be monitored because the kernel doesn't provide traffic information for that type of interfaces. Such interfaces are usually named *eth0:0*, *eth0:1*, *eth0:2* etc. where *eth0* is the actual interface being aliased.

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SEE ALSO

vnstatd(1), **vnstati(1)**, **vnstat.conf(1)**, **proc(5)**, **ifconfig(8)**, **units(7)**