NAME

vnStat – a console-based network traffic monitor

SYNOPSIS

vnstat [**–Ddhlmqrstuvw?**] [**–i** *interface*] [**–ru**] [**–tr** *time*] [**––cleartop**] [**––config** *file*] [**––days**] [**––delete**] [**––dbdir** *directory*] [**––debug**] [**––disable**] [**––dumpdb**] [**––enable**] [**––help**] [**––hours**] [**––iface** *interface*] [**––iflist**] [**––live**] [**––locale** *locale*] [**––longhelp**] [**––months**] [**––nick** *nickname*] [**––oneline**] [**––query**] [**––rateunit**] [**––rebuildtotal**] [**––reset**] [**––short**] [**––showconfig**] [**––style** *number*] [**––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.

--style *number*
Modify the content and style of outputs. Set *number* to 0 for a more narrow output, 1 for enabling bar column, 2 for same as previous but with average traffic rate visible in summary and weekly outputs and 3 for enabling average traffic rate in all outputs where it is supported.

-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.

-ru, --rateunit
Swap the configured rate unit. If rate has been configured to be shown in bytes then rate will be shown in bits if this option is present. In the same way, if rate has been configured to be shown in bits then rate will be shown in bytes when this option is present. Alternatively 0 or 1 can be given as parameter for this option in order to select between bytes (0) and bits (1) regardless of the configuration file setting.

-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. These two options aren't needed when the daemon is used.

--delete
Delete the database for the selected interface and stop monitoring it.

-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.

--dbdir *directory*
Use *directory* as database directory instead of using the directory specified in the configuration file or the hardcoded default if no configuration file is available.

--locale *locale*
Use *locale* instead of using the locale setting specified in the configuration file or the system default if no configuration file is available.

--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.

--oneline
Show traffic summary for selected interface using one line with a parseable format. The output contains 15 fields with ; used as field delimeter. The 1st field contains the version information of the output that will be changed in future versions of vnStat if the field structure changes. The following fields in order 2) interface name, 3) timestamp for today, 4) rx for today, 5) tx for today, 6) total for today, 7) average traffic rate for today, 8) timestamp for current month, 9) rx for current

month, 10) tx for current month, 11) total for current month, 12) average traffic rate for today, 13) all time total rx, 14) all time total tx, 15) all time total traffic.

--dumpdb

Instead of showing the database with a formated 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 delimeter.

```
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**(5) for more information.

EXAMPLES

vnstat Display traffic summary for the default interface.

vnstat -i eth0+eth1+eth3

Display traffic summary for a merge of interfaces eth0, eth1 and eth3.

vnstat -i eth2 --xml

Output all information about interface eth2 in xml format.

vnstat -u -i eth0

Force a database update for interface eth0 or create the database if it doesn't exist. This is usually the first command used after a fresh install.

vnstat -u -i eth0 --nick local
Give interface eth0 the nickname "local". That information will be later later visible as a label when eth0 is queried. The database will also be updated when this command is executed or created if the database doesn't exist.

vnstat -i eth2 --delete
Delete database of interface eth2 and stop monitoring it.

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 still a working option.

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**(5), **proc**(5), **ifconfig**(8), **units**(7)