

Monitoring Disk use, CPU Load, Memory use and Network in one console ncurses interface - Glance

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If you're **Linux / UNIX / BSD system administrator** you already have experience with basic admin's system monitoring:

- CPU load
- OS Name/Kernel version
- System load average and Uptime
- Disk and Network Input/Output I/O operations by interface
- Process statistics / Top loading processes etc.
- Memory / SWAP usage and free memory
- Mounted partitions

Such info is provided by command line tools such as:

top, df, free, sensors, ifconfig, iotop, hddtemp, mount, nfsstat, nfsiostat, dstat, uptime, nethogs iptraf

etc.

There are plenty of others advanced tools also **Web based server monitoring visualization tools**, such as Monit, [Icanga](#), [PHPSysInfo](#), [Cacti](#) which provide you **statistics on computer hardware and network utilization**

So far so good, if you already are used to convenience of web *NIX based monitoring but you don't want to put load on the servers with such and you're lazy to write custom scripts that show most important monitoring information - necessary for **daily system administration monitoring and prevention from downtimes and tracking bottlenecks** you will be glad to hear about **Glances**

Glances is a free (LGPL) cross-platform curses-based monitoring tool which aims to present a maximum of information in a minimum of space, ideally to fit in a classical 80x24 terminal or higher to have additionnal information. Glances can adapt dynamically the displayed information depending on the terminal size. It can also work in a client/server mode for remote monitoring.

1. Installing Glances curses-based monitoring tool on Debian 7 / Ubuntu 13+ / Mint Linux

We have to **install python-pip** (python package installer tool) to later install Glances

```
apt-get install --yes 'python-dev' 'python-jinja2' 'python-psutil'  
'python-setuptools' 'hddtemp' 'python-pip' 'lm-sensors'
```

Before proceeding to install **Glances** to make Thermal sensors working (if supported by hardware) run:

```
sensors-detect
```

Glances is written in Python and uses **psutil** library to obtain monitoring statistic values, thus it is necessary to install few more Python libraries:

```
pip install 'batinfo' 'pysensors'
```

If you're about to use **pip** - Python package installer tool, behind a proxy server use instead:

```
pip install --proxy=http://your-proxy-host.com:8080 'batinfo' 'pysensors'
```

Then *install Glances script itself again using pip*

```
pip install 'Glances'
```

Downloading/unpacking Glances

Downloading Glances-2.0.1.tar.gz (3.3Mb): 3.3Mb downloaded

Running setup.py egg_info for package Glances

Downloading/unpacking psutil>=2.0.0 (from Glances)

Downloading psutil-2.1.1.tar.gz (216Kb): 216Kb downloaded

Running setup.py egg_info for package psutil

...

Successfully installed Glances psutil

Then *run glances from terminal*

```
glances -t 3
```

-t 3 option tells glances to refresh collected statistics every 3 seconds

```
xterm (as superuser)
rubelev (debian 7.4 32bit / Linux 3.2.0-4-686-pae) Uptime: 15:44:59

CPU 100.0% nice: 0.0% LOAD 1-core
user: 93.3% irq: 0.0% 1 min: 1.68
system: 16.4% iowait: 0.3% 5 min: 1.60
idle: 0.0% steal: 0.0% 15 min: 1.61

MEM 87.3% active: 2.46G
total: 3.70G inactive: 910M
used: 3.23G buffers: 18.8M
free: 479M cached: 205M
SWP 38.5%
total: 2.47G
used: 976M
free: 1.52G

TASKS 321 (800 thr), 2 run, 319 slp, 0 oth sorted automatically by memory_percent

NETWORK Rx/s Tx/s
eth0 0b 168b
lo 3Kb 3Kb

DISK I/O R/s W/s
fd0 0 0
sda1 0 26K
sda2 0 0
sda5 3K 0
sr0 0 0

FILE SYS Used Total
/ 15.1G 56.6G
_/cdrom0 61.8M 61.8M

CPU% MEM% VIRT RES PID USER NI S TIME+ IOR/s IOM/s Command
77.5 56.6 2.73G 2.09G 23522 hipo 0 R 14:49.95 3K 0 /usr/lib/1386-linux-gnu/wine/wineserver
1.2 10.5 967M 398M 12409 root 0 S 18:38.91 0 3K /usr/bin/java -Djava.endorsed.dirs=/usr/share/ope
4.7 5.5 1.12G 206M 4524 hipo 0 S 31:07.46 0 0 iceweasel
0.0 1.1 310M 41.5M 17257 hipo 0 S 0:53.57 0 0 gimp
3.2 0.9 103M 35.4M 2214 root 0 S 7:51.43 0 0 /usr/bin/Xorg :0 -br -verbose -nouvswitch -auth /
5.0 0.5 92.3M 20.4M 10685 hipo 0 S 31:20.24 0 0 /usr/bin/gtk-gnash -u https://a248.e.akamai.net/i
0.0 0.5 552M 20.4M 4298 hipo 0 S 0:24.51 0 0 nautilus -n
0.0 0.5 21.1M 18.0M 8630 hipo 0 S 0:02.51 0 0 Xtightvnc :4 -desktop X -auth /var/run/gdm3/auth-
0.0 0.4 18.2M 15.4M 8035 hipo 0 S 0:01.55 0 0 Xtightvnc :2 -desktop X -auth /var/run/gdm3/auth-
0.0 0.4 259M 15.4M 8780 hipo 0 S 0:02.15 0 0 nautilus -n
0.3 0.4 248M 15.0M 4173 hipo 0 S 0:37.65 0 0 gnome-panel
0.0 0.4 443M 14.5M 4416 hipo 0 S 1:11.55 0 0 gnome-terminal
0.0 0.4 47.5M 14.8M 8239 hipo 0 S 0:01.31 0 0 Xtightvnc :3 -desktop X -auth /var/run/gdm3/auth-
0.0 0.3 184M 12.0M 8242 hipo 0 S 0:01.59 0 0 nautilus -n
0.0 0.3 184M 12.0M 8501 hipo 0 S 0:01.58 0 0 nautilus -n
5.2 0.3 17.5M 11.9M 19001 root 0 R 0:06.26 0 0 /usr/bin/python /usr/local/bin/glances
0.0 0.3 170M 11.9M 8754 hipo 0 S 0:01.13 0 0 gnome-panel
0.0 0.3 171M 11.7M 8156 hipo 0 S 0:01.30 0 0 gnome-panel
0.0 0.3 162M 11.6M 8476 hipo 0 S 0:01.50 0 0 gnome-panel
0.0 0.3 131M 10.4M 8491 hipo 0 S 0:00.31 0 0 /usr/lib/notification-daemon/notification-daemon
0.0 0.3 131M 10.4M 8770 hipo 0 S 0:00.28 0 0 /usr/lib/notification-daemon/notification-daemon
0.0 0.3 151M 9.80M 12292 hipo 0 S 0:00.25 0 0 gnome-terminal
0.0 0.3 65.4M 9.75M 8792 hipo 0 S 0:02.53 0 0 /usr/lib/tracker/tracker-store
0.0 0.2 64.9M 9.39M 8288 hipo 0 S 0:02.57 0 0 /usr/lib/tracker/tracker-store
0.0 0.2 64.8M 9.27M 8508 hipo 0 S 0:01.82 0 0 /usr/lib/tracker/tracker-store
0.0 0.2 68.8M 8.93M 8443 hipo 0 S 0:00.96 0 0 /usr/lib/gnome-settings-daemon/gnome-settings-dae
0.0 0.2 76.9M 8.93M 8722 hipo 0 S 0:00.97 0 0 /usr/lib/gnome-settings-daemon/gnome-settings-dae
0.0 0.2 68.8M 8.87M 8126 hipo 0 S 0:01.37 0 0 /usr/lib/gnome-settings-daemon/gnome-settings-dae
0.0 0.2 40.4M 8.79M 17761 bind 0 S 0:00.20 0 0 /usr/sbin/named -u bind
0.0 0.2 66.3M 8.90M 4353 hipo 0 S 0:02.50 0 0 /usr/lib/tracker/tracker-store
0.0 0.2 131M 8.12M 8186 hipo 0 S 0:00.30 0 0 /usr/lib/notification-daemon/notification-daemon
0.0 0.2 36.9M 8.10M 17190 root 0 S 0:00.12 0 0 /usr/sbin/apache2 -k start
0.0 0.2 225M 8.06M 8498 hipo 0 S 0:00.10 0 0 na-applet
0.0 0.2 225M 8.06M 8777 hipo 0 S 0:00.90 0 0 na-applet
0.0 0.2 225M 8.06M 8209 hipo 0 S 0:00.90 0 0 na-applet
0.0 0.2 190M 7.90M 8241 hipo 0 S 0:00.11 0 0 gnome-sound-applet
0.0 0.2 190M 7.90M 8500 hipo 0 S 0:00.11 0 0 gnome-sound-applet
0.0 0.2 190M 7.90M 8779 hipo 0 S 0:00.10 0 0 gnome-sound-applet
0.0 0.2 275M 7.49M 4243 hipo 0 S 0:01.66 0 0 /usr/lib/notification-daemon/notification-daemon
1.2 0.2 213M 7.36M 4168 hipo 0 S 0:15.93 0 0 /usr/bin/metacity
0.0 0.2 45.5M 7.30M 17086 postgres 0 S 0:00.61 0 0 /usr/lib/postgresql/9.1/bin/postgres -D /var/lib/
0.0 0.2 242M 7.20M 4133 hipo 0 S 0:08.14 0 0 /usr/lib/gnome-settings-daemon/gnome-settings-dae
0.0 0.2 57.6M 7.17M 8489 hipo 0 S 0:00.11 0 0 /usr/lib/evolution/3.4/evolution-alarm-notify
0.0 0.2 57.6M 7.06M 8768 hipo 0 S 0:00.80 0 0 /usr/lib/evolution/3.4/evolution-alarm-notify
0.0 0.2 57.6M 7.05M 8182 hipo 0 S 0:00.10 0 0 /usr/lib/evolution/3.4/evolution-alarm-notify

Warning or critical alerts (lasts 3 entries)
2014-08-14 11:19:40 (ongoing) - MEM (Min:86.0 Mean:86.0 Max:87.0)
2014-08-14 11:19:40 (ongoing) - LOAD (Min:1.6 Mean:1.6 Max:1.6)
2014-08-14 11:19:40 (ongoing) - CPU_USER (Min:72.2 Mean:85.8 Max:89.8)
```

2. Installing Glances monitoring console tool on CentOS / RHEL / Fedora / Scientific Linux

Installing glances on CentOS 7 / Fedora and rest of RPM based distributions can be done by adding external RPM repositories, cause *glances* is not available in default yum repositories.

To enable Extra-packages repositories:

rpm -ivh http://dl.fedoraproject.org/pub/epel/6/x86_64/epel-release-6-8.noarch.rpm

Then update yum to include new repository's packages into package list and install **python-pip** and **python-devel** rpms

yum update
yum install python-pip python-devel

```
CentOS 6.5 32bit with Linux 2.6.32-431.1.2.el6.i686 on localhost.localdomain
CPU 5.6% nice: 0.0% Load 1-core 12.7% Mem 12.7% active: 1.21G Swap 0.1%
user: 3.6% system: 1.6% idle: 94.4% iowait: 0.0% irq: 0.0% 1 min: 0.00 5 min: 0.00 15 min: 0.00
total: 3.83G used: 439M buffers: 307M cached: 1.64G free: 3.98G
free: 3.55G

Network Rx/s Tx/s Processes 122, 1 running, 121 sleeping, 0 other sorted automatically
eth0 2.14MB 137KB
lo 0b 0b
VIRT RES CPU% MEM% PID USER NI S TIME+ TOR/s IOW/s NAME
sda1 0 0 218M 21M 1.3 0.5 5864 midday 0 S 0:00.53 0 0 /usr/bin/python /usr/bin/glances
sda2 0 0 218M 23M 1.3 0.6 32716 midday 0 S 0:04.27 0 0 /usr/sbin/httpd
sda3 0 0 212M 23M 1.0 0.6 32714 midday 0 S 0:04.15 0 0 /usr/sbin/httpd
sda4 0 0 3M 1M 0.0 0.0 1 root 0 S 0:04.44 0 0 /sbin/init
sda5 0 0 0 0 0.0 0.0 2 root 0 S 0:00.00 0 0 kthreadd
sda6 0 0 0 0 0.0 0.0 3 root 0 S 0:00.00 0 0 migration/0
sda7 7K 0 0 0 0.0 0.0 4 root 0 S 0:00.16 0 0 ksftirqd/0
sda8 0 0 0 0 0.0 0.0 5 root 0 S 0:00.00 0 0 migration/0
Mount Used Total 0 0 0.0 0.0 6 root 0 S 0:16.88 0 0 watchdog/0
/ 12.2G 99.8G 0 0 0.0 0.0 7 root 0 S 1:30.25 0 0 events/0
/boot 95.4M 194M 0 0 0.0 0.0 8 root 0 S 0:00.00 0 0 cgroup
/data 73.2G 96.1G 0 0 0.0 0.0 9 root 0 S 0:00.00 0 0 khelper
/home 38.7G 96.1G 0 0 0.0 0.0 10 root 0 S 0:00.00 0 0 netns
0 0 0.0 0.0 11 root 0 S 0:00.00 0 0 async/mgr
0 0 0.0 0.0 12 root 0 S 0:00.00 0 0 pm
0 0 0.0 0.0 13 root 0 S 0:11.90 0 0 sync supers
0 0 0.0 0.0 14 root 0 S 0:10.51 0 0 bdi-default
0 0 0.0 0.0 15 root 0 S 0:00.00 0 0 kintegrityd/0
0 0 0.0 0.0 16 root 0 S 0:24.62 0 0 kblockd/0
0 0 0.0 0.0 17 root 0 S 0:00.00 0 0 kacpid
0 0 0.0 0.0 18 root 0 S 0:00.00 0 0 kacpi_notify
0 0 0.0 0.0 19 root 0 S 0:00.00 0 0 kacpi_hotplug
0 0 0.0 0.0 20 root 0 S 0:00.00 0 0 ata_aux
0 0 0.0 0.0 21 root 0 S 40:00.19 0 0 ata_sff/0
0 0 0.0 0.0 22 root 0 S 0:00.00 0 0 ksuspend_usb
0 0 0.0 0.0 23 root 0 S 0:00.00 0 0 khubd
0 0 0.0 0.0 24 root 0 S 0:00.00 0 0 kseriod
0 0 0.0 0.0 25 root 0 S 0:00.00 0 0 md/0
0 0 0.0 0.0 26 root 0 S 0:00.00 0 0 md_misc/0
0 0 0.0 0.0 27 root 0 S 0:00.00 0 0 linkwatch
0 0 0.0 0.0 28 root 0 S 0:01.38 0 0 khungtaskd
0 0 0.0 0.0 29 root 0 S 0:00.80 0 0 kswapd0
0 0 0.0 0.0 30 root 5 S 0:00.00 0 0 ksm

Press 'h' for help
```

There is also FreeBSD port to **install Glances on FreeBSD**:

cd /usr/sysutils/py-glances
make install

Enjoy :) !