

Name – Anup Kore

Topic – iostat commands

Date – 14-04-2023

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anup@DESKTOP-UDNP065:~$ grep -c 'New_Group' /etc/group
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anup@DESKTOP-UDNP065:~$ iostat
Command 'iostat' not found, but can be installed with:
sudo apt install sysstat
anup@DESKTOP-UDNP065:~$ sudo apt install sysstat
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libsensors-config libsensors5
Suggested packages:
  lm-sensors isag
The following NEW packages will be installed:
  libsensors-config libsensors5 sysstat
0 upgraded, 3 newly installed, 0 to remove and 0 not upgraded.
Need to get 519 kB of archives.
After this operation, 1649 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu jammy/main amd64 libsensors-config all 1:3.6.0-7ubuntu1 [5274 B]
Get:2 http://archive.ubuntu.com/ubuntu jammy/main amd64 libsensors5 amd64 1:3.6.0-7ubuntu1 [26.3 kB]
Get:3 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 sysstat amd64 12.5.2-2ubuntu0.1 [487 kB]
Fetched 519 kB in 2s (298 kB/s)
Preconfiguring packages ...
Selecting previously unselected package libsensors-config.
(Reading database ... 24161 files and directories currently installed.)
Preparing to unpack .../libsensors-config_1%3a3.6.0-7ubuntu1_all.deb ...
Unpacking libsensors-config (1:3.6.0-7ubuntu1) ...
Selecting previously unselected package libsensors5:amd64.
Preparing to unpack .../libsensors5_1%3a3.6.0-7ubuntu1_amd64.deb ...
Unpacking libsensors5:amd64 (1:3.6.0-7ubuntu1) ...
Selecting previously unselected package sysstat.
Preparing to unpack .../sysstat_12.5.2-2ubuntu0.1_amd64.deb ...
Unpacking sysstat (12.5.2-2ubuntu0.1) ...
Setting up libsensors-config (1:3.6.0-7ubuntu1) ...
Setting up libsensors5:amd64 (1:3.6.0-7ubuntu1) ...
Setting up sysstat (12.5.2-2ubuntu0.1) ...

Creating config file /etc/default/sysstat with new version
update-alternatives: using /usr/bin/sar.sysstat to provide /usr/bin/sar (sar) in auto mode
Created symlink /etc/systemd/system/sysstat.service.wants/sysstat-collect.timer → /lib/systemd/system/sysstat-collect.timer.
Created symlink /etc/systemd/system/sysstat.service.wants/sysstat-summary.timer → /lib/systemd/system/sysstat-summary.timer.
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anup@DESKTOP-UDNP065:~$ iostat
Linux 4.4.0-19041-Microsoft (DESKTOP-UDNP065) 04/14/23 _x86_64_ (4 CPU)

avg-cpu:  %user   %nice %system %iowait  %steal   %idle
            8.04    0.00   3.34    0.00    0.00   88.63

Device            tps    kB_read/s    kB_wrtn/s    kB_dscd/s    kB_read    kB_wrtn    kB_dscd

anup@DESKTOP-UDNP065:~$ iostat -x
Linux 4.4.0-19041-Microsoft (DESKTOP-UDNP065) 04/14/23 _x86_64_ (4 CPU)

avg-cpu:  %user   %nice %system %iowait  %steal   %idle
            7.94    0.00   3.32    0.00    0.00   88.74

Device            r/s    rkB/s    rrqm/s    %rrqm  r_await  rareq-sz    w/s    wkB/s    wrqm/s    %wrqm  w_await  wareq-sz    d/s    dkB/s    drqm/s    %drqm  d_await  dareq-sz

f/s  f_await  aqu-sz    %util

anup@DESKTOP-UDNP065:~$ iostat -c
Linux 4.4.0-19041-Microsoft (DESKTOP-UDNP065) 04/14/23 _x86_64_ (4 CPU)

avg-cpu:  %user   %nice %system %iowait  %steal   %idle
            7.85    0.00   3.32    0.00    0.00   88.83

anup@DESKTOP-UDNP065:~$ iostat -d
Linux 4.4.0-19041-Microsoft (DESKTOP-UDNP065) 04/14/23 _x86_64_ (4 CPU)

Device            tps    kB_read/s    kB_wrtn/s    kB_dscd/s    kB_read    kB_wrtn    kB_dscd

anup@DESKTOP-UDNP065:~$
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anup@DESKTOP-UDNPO65:~$  
anup@DESKTOP-UDNPO65:~$ iostat -x  
Linux 4.4.0-19041-Microsoft (DESKTOP-UDNPO65) 04/14/23 _x86_64_ (4 CPU)  


| Device | r/s    | rkB/s | rrqm/s | %rrqm | r_wait | rareq-sz | w/s | wkB/s | wrqm/s | %wrqm | w_wait | wareq-sz | d/s | dkB/s | drqm/s | %drqm | d_wait | dareq-sz |
|--------|--------|-------|--------|-------|--------|----------|-----|-------|--------|-------|--------|----------|-----|-------|--------|-------|--------|----------|
| f/s    | f_wait | aq-sz | %util  |       |        |          |     |       |        |       |        |          |     |       |        |       |        |          |

  
anup@DESKTOP-UDNPO65:~$  
anup@DESKTOP-UDNPO65:~$ iostat -k  
Linux 4.4.0-19041-Microsoft (DESKTOP-UDNPO65) 04/14/23 _x86_64_ (4 CPU)  


| avg-cpu: | %user | %nice | %system | %iowait | %steal | %idle |
|----------|-------|-------|---------|---------|--------|-------|
|          | 7.69  | 0.00  | 3.35    | 0.00    | 0.00   | 88.97 |

  


| Device | tps | kB_read/s | kB_wrtn/s | kB_dscd/s | kB_read | kB_wrtn | kB_dscd |
|--------|-----|-----------|-----------|-----------|---------|---------|---------|
|        |     |           |           |           |         |         |         |

  
anup@DESKTOP-UDNPO65:~$  
anup@DESKTOP-UDNPO65:~$ iostat -p  
Linux 4.4.0-19041-Microsoft (DESKTOP-UDNPO65) 04/14/23 _x86_64_ (4 CPU)  


| avg-cpu: | %user | %nice | %system | %iowait | %steal | %idle |
|----------|-------|-------|---------|---------|--------|-------|
|          | 7.61  | 0.00  | 3.33    | 0.00    | 0.00   | 89.05 |

  


| Device | tps | kB_read/s | kB_wrtn/s | kB_dscd/s | kB_read | kB_wrtn | kB_dscd |
|--------|-----|-----------|-----------|-----------|---------|---------|---------|
|        |     |           |           |           |         |         |         |

  
anup@DESKTOP-UDNPO65:~$  
anup@DESKTOP-UDNPO65:~$ iostat -N  
Linux 4.4.0-19041-Microsoft (DESKTOP-UDNPO65) 04/14/23 _x86_64_ (4 CPU)  


| avg-cpu: | %user | %nice | %system | %iowait | %steal | %idle |
|----------|-------|-------|---------|---------|--------|-------|
|          | 7.60  | 0.00  | 3.33    | 0.00    | 0.00   | 89.07 |

  


| Device | tps | kB_read/s | kB_wrtn/s | kB_dscd/s | kB_read | kB_wrtn | kB_dscd |
|--------|-----|-----------|-----------|-----------|---------|---------|---------|
|        |     |           |           |           |         |         |         |

  
anup@DESKTOP-UDNPO65:~$
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anup@DESKTOP-UDNPO65:~$  
IOSTAT(1) Linux User's Manual IOSTAT(1)  
  
NAME  
iostat - Report Central Processing Unit (CPU) statistics and input/output statistics for devices and partitions.  
  
SYNOPSIS  
iostat [ -c ] [ -d ] [ -h ] [ -k ] [ -m ] [ -N ] [ -s ] [ -t ] [ -V ] [ -x ] [ -y ] [ -z ] [ --dec={ 0 | 1 | 2 } ] [ { -f | +f } directory ] [ -j { ID | LABEL | PATH | UUID | ... } ] [ -o JSON ] [ [ -H ] -g group_name ] [ --human ] [ --pretty ] [ -p [ device[,...] | ALL ] ] [ device [...] | ALL ] [ interval ] [ count ] ]  
  
DESCRIPTION  
The iostat command is used for monitoring system input/output device loading by observing the time the devices are active in relation to their average transfer rates. The iostat command generates reports that can be used to change system configuration to better balance the input/output load between physical disks.  
  
The first report generated by the iostat command provides statistics concerning the time since the system was booted, unless the -y option is used (in this case, this first report is omitted). Each subsequent report covers the time since the previous report. All statistics are reported each time the iostat command is run. The report consists of a CPU header row followed by a row of CPU statistics. On multiprocessor systems, CPU statistics are calculated system-wide as averages among all processors. A device header row is displayed followed by a line of statistics for each device that is configured.  
  
The interval parameter specifies the amount of time in seconds between each report. The count parameter can be specified in conjunction with the interval parameter. If the count parameter is specified, the value of count determines the number of reports generated at interval seconds apart. If the interval parameter is specified without the count parameter, the iostat command generates reports continuously.  
  
REPORTS  
The iostat command generates two types of reports, the CPU Utilization report and the Device Utilization report.  
  
CPU Utilization Report  
The first report generated by the iostat command is the CPU Utilization Report. For multiprocessor systems, the CPU values are global averages among all processors. The report has the following format:  
  
%user Show the percentage of CPU utilization that occurred while executing at the user level (application).  
%nice Show the percentage of CPU utilization that occurred while executing at the user level with nice priority.  
%system Show the percentage of CPU utilization that occurred while executing at the system level (kernel).  
%iowait Show the percentage of time that the CPU or CPUs were idle during which the system had an outstanding disk I/O request.  
%steal Show the percentage of time spent in involuntary wait by the virtual CPU or CPUs while the hypervisor was servicing another virtual processor.  
  
Manual page iostat(1) line 1 (press h for help or q to quit)
```