

**NAME**

iotop - simple top-like I/O monitor

**SYNOPSIS**

**iotop** [*OPTIONS*]

**DESCRIPTION**

iotop watches I/O usage information output by the Linux kernel (requires 2.6.20 or later) and displays a table of current I/O usage by processes or threads on the system. At least the `CONFIG_TASK_DELAY_ACCT`, `CONFIG_TASK_IO_ACCOUNTING`, `CONFIG_TASKSTATS` and `CONFIG_VM_EVENT_COUNTERS` options need to be enabled in your Linux kernel build configuration.

iotop displays columns for the I/O bandwidth read and written by each process/thread during the sampling period. It also displays the percentage of time the thread/process spent while swapping in and while waiting on I/O. For each process, its I/O priority (class/level) is shown.

In addition, the total I/O bandwidth read and written during the sampling period is displayed at the top of the interface. **Total DISK READ** and **Total DISK WRITE** values represent total read and write bandwidth between processes and kernel threads on the one side and kernel block device subsystem on the other. While **Actual DISK READ** and **Actual DISK WRITE** values represent corresponding bandwidths for actual disk I/O between kernel block device subsystem and underlying hardware (HDD, SSD, etc.). Thus **Total** and **Actual** values may not be equal at any given moment of time due to data caching and I/O operations reordering that take place inside Linux kernel.

Use the left and right arrows to change the sorting, r to reverse the sorting order, o to toggle the `--only` option, p to toggle the `--processes` option, a to toggle the `--accumulated` option, q to quit or i to change the priority of a thread or a process' thread(s). Any other key will force a refresh.

**OPTIONS****--version**

Show the version number and exit

**-h, --help**

Show usage information and exit

**-o, --only**

Only show processes or threads actually doing I/O, instead of showing all processes or threads. This can be dynamically toggled by pressing o.

**-b, --batch**

Turn on non-interactive mode. Useful for logging I/O usage over time.

**-n NUM, --iter=NUM**

Set the number of iterations before quitting (never quit by default). This is most useful in non-interactive mode.

**-d SEC, --delay=SEC**

Set the delay between iterations in seconds (1 second by default). Accepts non-integer values such as 1.1 seconds.

**-p PID, --pid=PID**

A list of processes/threads to monitor (all by default).

**-u USER, --user=USER**

A list of users to monitor (all by default)

**-P, --processes**

Only show processes. Normally iotop shows all threads.

**-a, --accumulated**

Show accumulated I/O instead of bandwidth. In this mode, iotop shows the amount of I/O processes have done since iotop started.

**-k, --kilobytes**

Use kilobytes instead of a human friendly unit. This mode is useful when scripting the batch mode of iotop. Instead of choosing the most appropriate unit iotop will display all sizes in kilobytes.

**-t, --time**

Add a timestamp on each line (implies --batch). Each line will be prefixed by the current time.

**-q, --quiet**

suppress some lines of header (implies --batch). This option can be specified up to three times to remove header lines.

**-q** column names are only printed on the first iteration,

**-qq** column names are never printed,

**-qqq** the I/O summary is never printed.

**SEE ALSO**

[ionice\(1\)](#), [top\(1\)](#), [vmstat\(1\)](#), [atop\(1\)](#), [htop\(1\)](#)

**AUTHOR**

iotop was written by Guillaume Chazarain.

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