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## Rocky Enterprise Linux 9.2 Manual Pages on command 'ionice.1'

**$ man ionice.1**

IONICE(1)                    User Commands                    IONICE(1)

NAME

    ionice - set or get process I/O scheduling class and priority

SYNOPSIS

    ionice [-c class] [-n level] [-t] -p PID

    ionice [-c class] [-n level] [-t] -P PGID

    ionice [-c class] [-n level] [-t] -u UID

    ionice [-c class] [-n level] [-t] command [argument] ...

DESCRIPTION

    This program sets or gets the I/O scheduling class and priority for a

    program. If no arguments or just -p is given, ionice will query the

    current I/O scheduling class and priority for that process.

    When command is given, ionice will run this command with the given

    arguments. If no class is specified, then command will be executed with

    the "best-effort" scheduling class. The default priority level is 4.

    As of this writing, a process can be in one of three scheduling

    classes:

    Idle

A program running with idle I/O priority will only get disk time when no other program has asked for disk I/O for a defined grace period. The impact of an idle I/O process on normal system activity should be zero. This scheduling class does not take a priority argument. Presently, this scheduling class is permitted for an ordinary user (since kernel 2.6.25).

Best-effort

This is the effective scheduling class for any process that has not asked for a specific I/O priority. This class takes a priority argument from 0-7, with a lower number being higher priority. Programs running at the same best-effort priority are served in a round-robin fashion.

Note that before kernel 2.6.26 a process that has not asked for an I/O priority formally uses "none" as scheduling class, but the I/O scheduler will treat such processes as if it were in the best-effort class. The priority within the best-effort class will be dynamically derived from the CPU nice level of the process: io_priority = (cpu_nice + 20) / 5.

For kernels after 2.6.26 with the CFQ I/O scheduler, a process that has not asked for an I/O priority inherits its CPU scheduling class. The I/O priority is derived from the CPU nice level of the process (same as before kernel 2.6.26).

Realtime

The RT scheduling class is given first access to the disk, regardless of what else is going on in the system. Thus the RT class needs to be used with some care, as it can starve other processes. As with the best-effort class, 8 priority levels are defined denoting how big a time slice a given process will receive on each scheduling window. This scheduling class is not permitted for an ordinary (i.e., non-root) user.

OPTIONS

-c, --class class

Specify the name or number of the scheduling class to use; 0 for

none, 1 for realtime, 2 for best-effort, 3 for idle.

-n, --classdata level

    Specify the scheduling class data. This only has an effect if the

    class accepts an argument. For realtime and best-effort, 0-7 are

    valid data (priority levels), and 0 represents the highest priority

    level.

-p, --pid PID...

    Specify the process IDs of running processes for which to get or

    set the scheduling parameters.

-P, --pgid PGID...

    Specify the process group IDs of running processes for which to get

    or set the scheduling parameters.

-t, --ignore

    Ignore failure to set the requested priority. If command was

    specified, run it even in case it was not possible to set the

    desired scheduling priority, which can happen due to insufficient

    privileges or an old kernel version.

-h, --help

    Display help text and exit.

-u, --uid UID...

    Specify the user IDs of running processes for which to get or set

    the scheduling parameters.

-V, --version

    Display version information and exit.

NOTES

    Linux supports I/O scheduling priorities and classes since 2.6.13 with

    the CFQ I/O scheduler.

EXAMPLES

    ?  # ionice -c 3 -p 89

    Sets process with PID 89 as an idle I/O process.

    ?  # ionice -c 2 -n 0 bash

    Runs 'bash' as a best-effort program with highest priority.

    ?  # ionice -p 89 91

Prints the class and priority of the processes with PID 89 and 91.

AUTHORS

Jens Axboe <jens@axboe.dk>, Karel Zak <kzak@redhat.com>

SEE ALSO

ioprio_set(2)

REPORTING BUGS

For bug reports, use the issue tracker at

https://github.com/karelzak/util-linux/issues.

AVAILABILITY

The ionice command is part of the util-linux package which can be

downloaded from Linux Kernel Archive

<https://www.kernel.org/pub/linux/utils/util-linux/>.

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