

NAME

coresched – manage core scheduling cookies for tasks

SYNOPSIS

coresched [**get**] [**-s** *pid*]

coresched new [**-t** *type*] **-d** *pid*

coresched new [**-t** *type*] **-- command** [*argument...*]

coresched copy [**-s** *pid*] [**-t** *type*] **-d** *pid*

coresched copy [**-s** *pid*] [**-t** *type*] **-- command** [*argument...*]

DESCRIPTION

The **coresched** command is used to retrieve or modify the core scheduling cookies of a running process given its *pid*, or to spawn a new *command* with core scheduling cookies.

Core scheduling permits the definition of groups of tasks that are allowed to share a physical core. This is done by assigning a cookie to each task. Only tasks have the same cookie are allowed to be scheduled on the same physical core.

It is possible to either assign a new random cookie to a task, or copy a cookie from another task. It is not possible to choose the value of the cookie.

FUNCTIONS**get**

Retrieve the core scheduling cookie of the PID specified in **-s**. If **-s** is omitted, it will get the cookie of the current **coresched** process.

new

Assign a new cookie to an existing PID specified in **-d**, or execute *command* with a new cookie.

copy

Copy the cookie from an existing PID (**-s**) to another PID (**-d**), or execute *command* with that cookie. If **-s** is omitted, it will get the cookie of the current **coresched** process.

If no function is specified, it will run the **get** function.

OPTIONS

-s, --source *PID*

Which *PID* to get the cookie from. If this option is omitted, it will get the cookie from the current **coresched** process.

-d, --dest *PID*

Which *PID* to modify the cookie of.

-t, --dest-type *TYPE*

The type of the PID whose cookie will be modified. This can be one of three values:

- **pid**, or process ID
- **tgid**, or thread group ID (default value)
- **pgid**, or process group ID

-v, --verbose

Show extra information when modifying cookies of tasks.

-h, --help
Display help text and exit.

-V, --version
Display version and exit.

EXAMPLES

Get the core scheduling cookie of the coresched task itself, usually inherited from its parent:

coresched get

Get the core scheduling cookie of a task with PID 123:

coresched get -s 123

Give a task with PID 123 a new core scheduling cookie:

coresched new -d 123

Spawn a new task with a new core scheduling cookie:

coresched new -- command [argument...]

Copy the cookie from the current coresched process another task with pid 456:

coresched copy -d 456

Copy the cookie from a task with pid 123 to another task with pid 456:

coresched copy -s 123 -d 456

Copy the cookie from a task with pid 123 to a new task *command*:

coresched copy -s 123 -- command [argument...]

Copy the cookie from a task with pid 123 to the process group ID 456:

coresched copy -s 123 -t pgid -d 456

PERMISSIONS

Retrieving or modifying the core scheduling cookie of a process requires **PTRACE_MODE_READ_REALCREDS** ptrace access to that process. See the section "Ptrace access mode checking" in **ptrace(2)** for more information.

EXIT STATUS

On success, **coresched** returns 0. If **coresched** fails, it will print an error and return 1.

If a *command* is being executed, the return value of **coresched** will be the return value of *command*.

NOTES

coresched requires core scheduling support in the kernel. This can be enabled via the **CONFIG_SCHED_CORE** kernel config option.

AUTHORS

Thijs Raymakers <thijs@raymakers.nl>, Phil Auld <pauld@redhat.com>

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SEE ALSO

chrt(1), **nice(1)**, **renice(1)**, **taskset(1)**, **ptrace(2)**, **sched(7)**

The Linux kernel source files *Documentation/admin-guide/hw-vuln/core-scheduling.rst*

REPORTING BUGS

For bug reports, use the issue tracker <<https://github.com/util-linux/util-linux/issues>>.

AVAILABILITY

The **coresched** 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/>>.