

**NAME**

`sched_setparam`, `sched_getparam` - set and get scheduling parameters

**SYNOPSIS**

```
#include <sched.h>
```

```
int sched_setparam(pid_t pid, const struct sched_param *param);
```

```
int sched_getparam(pid_t pid, struct sched_param *param);
```

```
struct sched_param {  
    int sched_priority;  
};
```

**DESCRIPTION**

`sched_setparam()` sets the scheduling parameters associated with the scheduling policy for the process identified by *pid*. If *pid* is zero, then the parameters of the calling process are set. The interpretation of the argument *param* depends on the scheduling policy of the process identified by *pid*. See [sched\(7\)](#) for a description of the scheduling policies supported under Linux.

`sched_getparam()` retrieves the scheduling parameters for the process identified by *pid*. If *pid* is zero, then the parameters of the calling process are retrieved.

`sched_setparam()` checks the validity of *param* for the scheduling policy of the thread. The value *param->sched\_priority* must lie within the range given by [sched\\_get\\_priority\\_min\(2\)](#) and [sched\\_get\\_priority\\_max\(2\)](#).

For a discussion of the privileges and resource limits related to scheduling priority and policy, see [sched\(7\)](#).

POSIX systems on which `sched_setparam()` and `sched_getparam()` are available define `_POSIX_PRIORITY_SCHEDULING` in `<unistd.h>`.

**RETURN VALUE**

On success, `sched_setparam()` and `sched_getparam()` return 0. On error, -1 is returned, and *errno* is set appropriately.

**ERRORS****EINVAL**

Invalid arguments: *param* is NULL or *pid* is negative

**EINVAL**

(`sched_setparam()`) The argument *param* does not make sense for the current scheduling policy.

**EPERM**

(`sched_setparam()`) The calling process does not have appropriate privileges (Linux: does not have the `CAP_SYS_NICE` capability).

**ESRCH**

The process whose ID is *pid* could not be found.

**CONFORMING TO**

POSIX.1-2001, POSIX.1-2008.

**NOTES**

Scheduling parameters are in fact per-thread attributes on Linux; see [sched\(7\)](#).

**SEE ALSO**

[getpriority\(2\)](#), [nice\(2\)](#), [sched\\_get\\_priority\\_max\(2\)](#), [sched\\_get\\_priority\\_min\(2\)](#), [sched\\_getaffinity\(2\)](#), [sched\\_getscheduler\(2\)](#), [sched\\_setaffinity\(2\)](#), [sched\\_setattr\(2\)](#), [sched\\_setscheduler\(2\)](#), [setpriority\(2\)](#), [capabilities\(7\)](#), [sched\(7\)](#)

**COLOPHON**

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