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 thread whose thread ID is specified in *pid*. If *pid* is zero, then the parameters of the calling thread are set. The interpretation of the argument *param* depends on the scheduling policy of the thread identified by *pid*. See **sched**(7) for a description of the scheduling policies supported under Linux.

sched_getparam() retrieves the scheduling parameters for the thread identified by *pid*. If *pid* is zero, then the parameters of the calling thread 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 caller does not have appropriate privileges (Linux: does not have the **CAP_SYS_NICE** capability).

ESRCH
: The thread whose ID is *pid* could not be found.

CONFORMING TO

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

SEE ALSO

getpriority(2), **gettid**(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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