



Linux Ubuntu 26.04 Manual Pages on command 'pthread_attr_setschedparam.3'

\$ man pthread_attr_setschedparam.3

pthread_attr_setschedparam(3) Library Functions Manual pthread_attr_setschedparam(3)

NAME

pthread_attr_setschedparam, pthread_attr_getschedparam - set/get scheduling parameter at?
tributes in thread attributes object

LIBRARY

POSIX threads library (libpthread, -lpthread)

SYNOPSIS

```
#include <pthread.h>

int pthread_attr_setschedparam(pthread_attr_t *restrict attr,
                               const struct sched_param *restrict param);

int pthread_attr_getschedparam(const pthread_attr_t *restrict attr,
                               struct sched_param *restrict param);
```

DESCRIPTION

The pthread_attr_setschedparam() function sets the scheduling parameter attributes of the thread attributes object referred to by attr to the values specified in the buffer pointed to by param. These attributes determine the scheduling parameters of a thread created using the thread attributes object attr.

The pthread_attr_getschedparam() returns the scheduling parameter attributes of the thread attributes object attr in the buffer pointed to by param.

Scheduling parameters are maintained in the following structure:

```
struct sched_param {
    int sched_priority; /* Scheduling priority */
};
```

As can be seen, only one scheduling parameter is supported. For details of the permitted ranges for scheduling priorities in each scheduling policy, see sched(7).

In order for the parameter setting made by `pthread_attr_setschedparam()` to have effect when calling `pthread_create(3)`, the caller must use `pthread_attr_setinheritsched(3)` to set the inherit-scheduler attribute of the attributes object `attr` to `PTHREAD_EXPLICIT_SCHED`.

RETURN VALUE

On success, these functions return 0; on error, they return a nonzero error number.

ERRORS

pthread_attr_setschedparam() can fail with the following error:

EINVAL The priority specified in param does not make sense for the current scheduling policy of attr.

POSIX.1 also documents an ENOTSUP error for `pthread_attr_setschedparam()`. This value is never returned on Linux (but portable and future-proof applications should nevertheless handle this error return value).

ATTRIBUTES

For an explanation of the terms used in this section, see `attributes(7)`.

[illegible]

?	Interface	?	Attribute	?	Value	?
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[illegible]

? pthread_attr_setschedparam(), pthread_attr_getschedparam() ? Thread safety ? MT-Safe ?

[illegible]

STANDARDS

POSIX.1-2008.

HISTORY

POSIX.1-2001. glibc 2.0.

NOTES

See `pthread_attr_setschedpolicy(3)` for a list of the thread scheduling policies supported on Linux.

EXAMPLES

See `pthread_setschedparam(3)`.

SEE ALSO

pthread_attr_setschedparam(3), pthread_attr_setschedpolicy(3), pthread_create(3), pthread_get_priority_min(2), pthread_attr_setinheritsched(3),

pthread_setschedprio(3), pthreads(7), sched(7)

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