

NAME

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

SYNOPSIS

```
#include <pthread.h>

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

Compile and link with *-pthread*.

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\(7\)](#).

Interface	Attribute	Value
pthread_attr_setschedparam() , pthread_attr_getschedparam()	Thread safety	MT-Safe

CONFORMING TO

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

NOTES

See [pthread_attr_setschedpolicy\(3\)](#) for a list of the thread scheduling policies supported on Linux.

EXAMPLE

See [pthread_setschedparam\(3\)](#).

SEE ALSO

[sched_get_priority_min\(2\)](#), [pthread_attr_init\(3\)](#), [pthread_attr_setinheritsched\(3\)](#),
[pthread_attr_setschedpolicy\(3\)](#), [pthread_create\(3\)](#), [pthread_setschedparam\(3\)](#), [pthread_setschedprio\(3\)](#),
[pthreads\(7\)](#), [sched\(7\)](#)

COLOPHON

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