NAME

pthread_attr_setschedparam, pthread_attr_getschedparam − set/get scheduling parameter attributes 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).

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

STANDARDS

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

NOTES

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

EXAMPLES

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)