

**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
<b>pthread_attr_setschedparam()</b> , <b>pthread_attr_getschedparam()</b>	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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