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## **Rocky Enterprise Linux 9.2 Manual Pages on command 'pthread\_attr\_getinheritsched.3'**

**\$ man pthread\_attr\_getinheritsched.3**

PTHREAD\_ATTR\_SETINHERITSCHED(3) Linux Programmer's Manual PTHREAD\_ATTR\_SETINHERITSCHED(3)

### **NAME**

pthread\_attr\_setinheritsched, pthread\_attr\_getinheritsched - set/get inherit-scheduler at?

tribute in thread attributes object

### **SYNOPSIS**

```
#include <pthread.h>

int pthread_attr_setinheritsched(pthread_attr_t *attr,
                                 int inheritsched);

int pthread_attr_getinheritsched(const pthread_attr_t *attr,
                                 int *inheritsched);
```

Compile and link with -pthread.

### **DESCRIPTION**

The pthread\_attr\_setinheritsched() function sets the inherit-scheduler attribute of the thread attributes object referred to by attr to the value specified in inheritsched. The inherit-scheduler attribute determines whether a thread created using the thread attributes object attr will inherit its scheduling attributes from the calling thread or whether it will take them from attr.

The following scheduling attributes are affected by the inherit-scheduler attribute:

scheduling policy (pthread\_attr\_setschedpolicy(3)), scheduling priority (pthread\_attr\_setschedparam(3)), and contention scope (pthread\_attr\_setscope(3)).

The following values may be specified in inheritsched:

### **PTHREAD\_INHERIT\_SCHED**

Threads that are created using attr inherit scheduling attributes from the creating

thread; the scheduling attributes in attr are ignored.

## PTHREAD\_EXPLICIT\_SCHED

Threads that are created using attr take their scheduling attributes from the val? ues specified by the attributes object.

The default setting of the inherit-scheduler attribute in a newly initialized thread at? tributes object is PTHREAD\_INHERIT\_SCHED.

The `pthread_attr_getinheritsched()` returns the inherit-scheduler attribute of the thread attributes object `attr` in the buffer pointed to by `inheritsched`.

## RETURN VALUE

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

## ERRORS

`pthread_attr_setinheritsched()` can fail with the following error:

EINVAL Invalid value in inheritsched.

POSIX.1 also documents an optional ENOTSUP error ("attempt was made to set the attribute to an unsupported value") for `pthread_attr_setinheritsched()`.

## ATTRIBUTES

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

?pthread\_attr\_setinheritsched(), ? Thread safety ? MT-Safe ?

?pthread\_attr\_getinheritsched() ? ? ?

## CONFORMING TO

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

## BUGS

As at glibc 2.8, if a thread attributes object is initialized using `pthread_attr_init(3)`, then the scheduling policy of the attributes object is set to `SCHED_OTHER` and the scheduling priority is set to 0. However, if the `inherit-scheduler` attribute is then set to `PTHREAD_EXPLICIT_SCHED`, then a thread created using the attribute object wrongly inherits its scheduling attributes from the creating thread. This bug does not occur if either the scheduling policy or scheduling priority attribute is explicitly set in the thread attributes object before calling `pthread_create(3)`.

## EXAMPLES

See `pthread_setschedparam(3)`.

## SEE ALSO

`pthread_attr_init(3)`, `pthread_attr_setschedparam(3)`, `pthread_attr_setschedpolicy(3)`,

`pthread_attr_setscope(3)`, `pthread_create(3)`, `pthread_setschedparam(3)`,

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

## COLOPHON

This page is part of release 5.10 of the Linux man-pages project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at <https://www.kernel.org/doc/man-pages/>.

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