



## **Red Hat Enterprise Linux Release 9.2 Manual Pages on 'pthread\_attr\_getinheritsched.3p' command**

**`$ man pthread_attr_getinheritsched.3p`**

PTHREAD\_ATTR\_GETINHERITSCHEPOSIX Programmer's PTHREAD\_ATTR\_GETINHERITSCHED(3P)

### PROLOG

This manual page is part of the POSIX Programmer's Manual. The Linux implementation of this interface may differ (consult the corresponding Linux manual page for details of Linux behavior), or the interface may not be implemented on Linux.

### NAME

`pthread_attr_getinheritsched`, `pthread_attr_setinheritsched` ? get and set the inheritsched attribute (REALTIME THREADS)

### SYNOPSIS

```
#include <pthread.h>

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

int pthread_attr_setinheritsched(pthread_attr_t *attr,
    int inheritsched);
```

### DESCRIPTION

The `pthread_attr_getinheritsched()` and `pthread_attr_setinheritsched()` functions, respectively, shall get and set the `inheritsched` attribute in the `attr` argument.

When the `attributes` objects are used by `pthread_create()`, the `inheritsched` attribute determines how the other scheduling attributes of the created thread shall be set.

The supported values of `inheritsched` shall be:

## PTHREAD\_INHERIT\_SCHED

Specifies that the thread scheduling attributes shall be inherited from the creating thread, and the scheduling attributes in this attr argument shall be ignored.

## PTHREAD\_EXPLICIT\_SCHED

Specifies that the thread scheduling attributes shall be set to the corresponding values from this attributes object.

The symbols PTHREAD\_INHERIT\_SCHED and PTHREAD\_EXPLICIT\_SCHED are defined in the <pthread.h> header.

The following thread scheduling attributes defined by POSIX.1-2008 are affected by the inheritsched attribute: scheduling policy (schedpolicy), scheduling parameters (schedparam), and scheduling contention scope (contentionscope).

The behavior is undefined if the value specified by the attr argument to pthread\_attr\_getinheritsched() or pthread\_attr\_setinheritsched() does not refer to an initialized thread attributes object.

## RETURN VALUE

If successful, the pthread\_attr\_getinheritsched() and pthread\_attr\_setinheritsched() functions shall return zero; otherwise, an error number shall be returned to indicate the error.

## ERRORS

The pthread\_attr\_setinheritsched() function shall fail if:

### ENOTSUP

An attempt was made to set the attribute to an unsupported value.

The pthread\_attr\_setinheritsched() function may fail if:

EINVAL The value of inheritsched is not valid.

These functions shall not return an error code of [EINTR].

The following sections are informative.

## EXAMPLES

None.

## APPLICATION USAGE

After these attributes have been set, a thread can be created with the

specified attributes using `pthread_create()`. Using these routines does not affect the current running thread.

See Section 2.9.4, Thread Scheduling for further details on thread scheduling attributes and their default settings.

## RATIONALE

If an implementation detects that the value specified by the `attr` argument to `pthread_attr_getinheritsched()` or `pthread_attr_setinheritsched()` does not refer to an initialized thread attributes object, it is recommended that the function should fail and report an `[EINVAL]` error.

## FUTURE DIRECTIONS

None.

## SEE ALSO

`pthread_attr_destroy()`, `pthread_attr_getscope()`, `pthread_attr_getschedpolicy()`, `pthread_attr_getschedparam()`, `pthread_create()`

The Base Definitions volume of POSIX.1-2017, `<pthread.h>`, `<sched.h>`

## COPYRIGHT

Portions of this text are reprinted and reproduced in electronic form from IEEE Std 1003.1-2017, Standard for Information Technology -- Portable Operating System Interface (POSIX), The Open Group Base Specifications Issue 7, 2018 Edition, Copyright (C) 2018 by the Institute of Electrical and Electronics Engineers, Inc and The Open Group. In the event of any discrepancy between this version and the original IEEE and The Open Group Standard, the original IEEE and The Open Group Standard is the referee document. The original Standard can be obtained online at <http://www.opengroup.org/unix/online.html>.

Any typographical or formatting errors that appear in this page are most likely to have been introduced during the conversion of the source files to man page format. To report such errors, see [https://www.kernel.org/doc/man-pages/reporting\\_bugs.html](https://www.kernel.org/doc/man-pages/reporting_bugs.html).