



Red Hat Enterprise Linux Release 9.2 Manual Pages on 'pthread_spin_lock.3p' command

\$ man pthread_spin_lock.3p

PTHREAD_SPIN_LOCK(3P) POSIX Programmer's Manual PTHREAD_SPIN_LOCK(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_spin_lock, pthread_spin_trylock ? lock a spin lock object

SYNOPSIS

```
#include <pthread.h>

int pthread_spin_lock(pthread_spinlock_t *lock);

int pthread_spin_trylock(pthread_spinlock_t *lock);
```

DESCRIPTION

The pthread_spin_lock() function shall lock the spin lock referenced by lock. The calling thread shall acquire the lock if it is not held by another thread. Otherwise, the thread shall spin (that is, shall not return from the pthread_spin_lock() call) until the lock becomes available. The results are undefined if the calling thread holds the lock at the time the call is made. The pthread_spin_trylock() function shall lock the spin lock referenced by lock if it is not held by any thread. Otherwise, the function shall fail.

The results are undefined if any of these functions is called with an uninitialized spin lock.

RETURN VALUE

Upon successful completion, these functions shall return zero; otherwise, an error number shall be returned to indicate the error.

ERRORS

The `pthread_spin_lock()` function may fail if:

EDEADLK

A deadlock condition was detected.

The `pthread_spin_trylock()` function shall fail if:

EBUSY A thread currently holds the lock.

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

The following sections are informative.

EXAMPLES

None.

APPLICATION USAGE

Applications using this function may be subject to priority inversion, as discussed in the Base Definitions volume of POSIX.1?2017, Section 3.291, Priority Inversion.

RATIONALE

If an implementation detects that the value specified by the lock argument to `pthread_spin_lock()` or `pthread_spin_trylock()` does not refer to an initialized spin lock object, it is recommended that the function should fail and report an `[EINVAL]` error.

If an implementation detects that the value specified by the lock argument to `pthread_spin_lock()` refers to a spin lock object for which the calling thread already holds the lock, it is recommended that the function should fail and report an `[EDEADLK]` error.

FUTURE DIRECTIONS

None.

SEE ALSO

`pthread_spin_destroy()`, `pthread_spin_unlock()`

The Base Definitions volume of POSIX.1?2017, Section 3.291, Priority Inversion, Section 4.12, Memory Synchronization, `<pthread.h>`

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