

**NAME**

**pthread\_spin\_lock**, **pthread\_spin\_trylock**, **pthread\_spin\_unlock** - lock or unlock a spin lock

**LIBRARY**

POSIX Threads Library (libpthread, -lpthread)

**SYNOPSIS**

```
#include <pthread.h>
```

*int*

```
pthread_spin_lock(pthread_spinlock_t *lock);
```

*int*

```
pthread_spin_trylock(pthread_spinlock_t *lock);
```

*int*

```
pthread_spin_unlock(pthread_spinlock_t *lock);
```

**DESCRIPTION**

The **pthread\_spin\_lock()** function will acquire *lock* if it is not currently owned by another thread. If the lock cannot be acquired immediately, it will spin attempting to acquire the lock (it will not sleep) until it becomes available.

The **pthread\_spin\_trylock()** function is the same as **pthread\_spin\_lock()** except that if it cannot acquire *lock* immediately it will return with an error.

The **pthread\_spin\_unlock()** function will release *lock*, which must have been previously locked by a call to **pthread\_spin\_lock()** or **pthread\_spin\_trylock()**.

**RETURN VALUES**

If successful, all these functions will return zero. Otherwise, an error number will be returned to indicate the error.

None of these functions will return EINTR.

**ERRORS**

The **pthread\_spin\_lock()**, **pthread\_spin\_trylock()** and **pthread\_spin\_unlock()** functions will fail if:

[EINVAL]           The value specified by *lock* is invalid or is not initialized.

The **pthread\_spin\_lock()** function may fail if:

[EDEADLK]           The calling thread already owns the lock.

The **pthread\_spin\_trylock()** function will fail if:

[EBUSY]            Another thread currently holds *lock*.

The **pthread\_spin\_unlock()** function may fail if:

[EPERM]            The calling thread does not own *lock*.

### SEE ALSO

pthread\_spin\_destroy(3), pthread\_spin\_init(3)

### HISTORY

The **pthread\_spin\_lock()**, **pthread\_spin\_trylock()** and **pthread\_spin\_unlock()** functions first appeared in N:M Threading Library (libkse, -lkse) in FreeBSD 5.2, and in 1:1 Threading Library (libthr, -lthr) in FreeBSD 5.3.

### BUGS

The implementation of **pthread\_spin\_lock()**, **pthread\_spin\_trylock()** and **pthread\_spin\_unlock()** is expected to conform to IEEE Std 1003.2 ("POSIX.2").