

**NAME**

**pthread\_rwlock\_init** - initialize a read/write lock

**LIBRARY**

POSIX Threads Library (libpthread, -lpthread)

**SYNOPSIS**

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

```
int
```

```
pthread_rwlock_init(pthread_rwlock_t *restrict lock, const pthread_rwlockattr_t *restrict attr);
```

**DESCRIPTION**

The **pthread\_rwlock\_init()** function is used to initialize a read/write lock, with attributes specified by *attr*. If *attr* is NULL, the default read/write lock attributes are used.

The results of calling **pthread\_rwlock\_init()** with an already initialized lock are undefined.

**RETURN VALUES**

If successful, the **pthread\_rwlock\_init()** function will return zero. Otherwise an error number will be returned to indicate the error.

**ERRORS**

The **pthread\_rwlock\_init()** function will fail if:

- |          |   |
|----------|---|
| [EAGAIN] | The system lacked the necessary resources (other than memory) to initialize the lock. |
| [ENOMEM] | Insufficient memory exists to initialize the lock.                                    |
| [EPERM]  | The caller does not have sufficient privilege to perform the operation.               |

The **pthread\_rwlock\_init()** function may fail if:

- |          |  |
|----------|--|
| [EBUSY]  | The system has detected an attempt to re-initialize the object referenced by <i>lock</i> , a previously initialized but not yet destroyed read/write lock. |
| [EINVAL] | The value specified by <i>attr</i> is invalid.   |

**SEE ALSO**

pthread\_rwlock\_destroy(3), pthread\_rwlockattr\_init(3), pthread\_rwlockattr\_setpshared(3)

## STANDARDS

The **pthread\_rwlock\_init()** function is expected to conform to Version 2 of the Single UNIX Specification ("SUSv2").

## HISTORY

The **pthread\_rwlock\_init()** function first appeared in FreeBSD 3.0.