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### ***Rocky Enterprise Linux 9.2 Manual Pages on command 'lockf.3'***

#### ***\$ man lockf.3***

LOCKF(3)                   Linux Programmer's Manual                   LOCKF(3)

#### NAME

lockf - apply, test or remove a POSIX lock on an open file

#### SYNOPSIS

```
#include <unistd.h>
```

```
int lockf(int fd, int cmd, off_t len);
```

Feature Test Macro Requirements for glibc (see feature\_test\_macros(7)):

```
lockf():
```

```
  _XOPEN_SOURCE >= 500
```

```
  || /* Glibc since 2.19: */ _DEFAULT_SOURCE
```

```
  || /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE
```

#### DESCRIPTION

Apply, test or remove a POSIX lock on a section of an open file. The file is specified by `fd`, a file descriptor open for writing, the action by `cmd`, and the section consists of byte positions `pos..pos+len-1` if `len` is positive, and `pos-len..pos-1` if `len` is negative, where `pos` is the current file position, and if `len` is zero, the section extends from the current file position to infinity, encompassing the present and fu?

ture end-of-file positions. In all cases, the section may extend past current end-of-file.

On Linux, lockf() is just an interface on top of fcntl(2) locking.

Many other systems implement lockf() in this way, but note that POSIX.1 leaves the relationship between lockf() and fcntl(2) locks unspecified.

A portable application should probably avoid mixing calls to these interfaces.

Valid operations are given below:

**F\_LOCK** Set an exclusive lock on the specified section of the file. If (part of) this section is already locked, the call blocks until the previous lock is released. If this section overlaps an earlier locked section, both are merged. File locks are released as soon as the process holding the locks closes some file descriptor for the file. A child process does not inherit these locks.

**F\_TLOCK**

Same as F\_LOCK but the call never blocks and returns an error instead if the file is already locked.

**F\_ULOCK**

Unlock the indicated section of the file. This may cause a locked section to be split into two locked sections.

**F\_TEST** Test the lock: return 0 if the specified section is unlocked or locked by this process; return -1, set errno to EAGAIN (EACCES on some other systems), if another process holds a lock.

**RETURN VALUE**

On success, zero is returned. On error, -1 is returned, and errno is set appropriately.

**ERRORS**

**EACCES or EAGAIN**

The file is locked and F\_TLOCK or F\_TEST was specified, or the operation is prohibited because the file has been memory-mapped by another process.

**EBADF** fd is not an open file descriptor; or cmd is F\_LOCK or F\_TLOCK

and fd is not a writable file descriptor.

### EDEADLK

The command was F\_LOCK and this lock operation would cause a deadlock.

EINTR While waiting to acquire a lock, the call was interrupted by de?

livery of a signal caught by a handler; see signal(7).

EINVAL An invalid operation was specified in cmd.

ENOLCK Too many segment locks open, lock table is full.

### ATTRIBUTES

For an explanation of the terms used in this section, see at?

tributes(7).

??

?Interface ? Attribute ? Value ?

??

?lockf() ? Thread safety ? MT-Safe ?

??

### CONFORMING TO

POSIX.1-2001, POSIX.1-2008, SVr4.

### SEE ALSO

fcntl(2), flock(2)

locks.txt and mandatory-locking.txt in the Linux kernel source direc?

tory Documentation/filesystems (on older kernels, these files are di?

rectly under the Documentation directory, and mandatory-locking.txt is

called mandatory.txt)

### 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/>.