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Rocky Enterprise Linux 9.2 Manual Pages on command 'utimes.2'

\$ man utimes.2

UTIME(2) Linux Programmer's Manual UTIME(2)

NAME

utime, utimes - change file last access and modification times

SYNOPSIS

```
#include <sys/types.h>

#include <utime.h>

int utime(const char *filename, const struct utimbuf *times);

#include <sys/time.h>

int utimes(const char *filename, const struct timeval times[2]);
```

DESCRIPTION

Note: modern applications may prefer to use the interfaces described in utimensat(2).

The `utime()` system call changes the access and modification times of the inode specified by filename to the `actime` and `modtime` fields of `times` respectively.

If `times` is `NULL`, then the access and modification times of the file are set to the current time.

Changing timestamps is permitted when: either the process has appropriate privileges, or the effective user ID equals the user ID of the file, or `times` is `NULL` and the process has write permission for the file.

The `utimbuf` structure is:

```
struct utimbuf {
    time_t actime;    /* access time */
    time_t modtime;   /* modification time */
};
```

The `utime()` system call allows specification of timestamps with a resolution of 1 second.

The `utimes()` system call is similar, but the `times` argument refers to an array rather than a structure. The elements of this array are `timeval` structures, which allow a precision of 1 microsecond for specifying timestamps. The `timeval` structure is:

```
struct timeval {
    long tv_sec;    /* seconds */
    long tv_usec;   /* microseconds */
};
```

`times[0]` specifies the new access time, and `times[1]` specifies the new modification time.

If `times` is `NULL`, then analogously to `utime()`, the access and modification times of the file are set to the current time.

RETURN VALUE

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

ERRORS

`EACCES` Search permission is denied for one of the directories in the path prefix of `path` (see also `path_resolution(7)`).

`EACCES` `times` is `NULL`, the caller's effective user ID does not match the owner of the file, the caller does not have write access to the file, and the caller is not privileged (Linux: does not have either the `CAP_DAC_OVERRIDE` or the `CAP_FOWNER` capability).

`ENOENT` filename does not exist.

`EPERM` `times` is not `NULL`, the caller's effective UID does not match the owner of the file, and the caller is not privileged (Linux: does not have the `CAP_FOWNER` capability).

`EROFS` `path` resides on a read-only filesystem.

CONFORMING TO

`utime()`: SVr4, POSIX.1-2001. POSIX.1-2008 marks `utime()` as obsolete.

`utimes()`: 4.3BSD, POSIX.1-2001.

NOTES

Linux does not allow changing the timestamps on an immutable file, or setting the timestamps to something other than the current time on an append-only file.

SEE ALSO

`chattr(1)`, `touch(1)`, `futimesat(2)`, `stat(2)`, `utimensat(2)`, `futimens(3)`, `futimes(3)`, `inode(7)`

COLOPHON

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2017-09-15

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