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

$ man time.2

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

NAME

time - get time in seconds

SYNOPSIS

#include <time.h>

time_t time(time_t *tloc);

DESCRIPTION

time() returns the time as the number of seconds since the Epoch,

1970-01-01 00:00:00 +0000 (UTC).

If tloc is non-NULL, the return value is also stored in the memory

pointed to by tloc.

RETURN VALUE

On success, the value of time in seconds since the Epoch is returned.

On error, ((time_t) -1) is returned, and errno is set appropriately.

ERRORS

EFAULT tloc points outside your accessible address space (but see

BUGS).

On systems where the C library time() wrapper function invokes

an implementation provided by the vdso(7) (so that there is no trap into the kernel), an invalid address may instead trigger a SIGSEGV signal.

CONFORMING TO

SVr4, 4.3BSD, C89, C99, POSIX.1-2001. POSIX does not specify any error conditions.

NOTES

POSIX.1 defines seconds since the Epoch using a formula that approxi? mates the number of seconds between a specified time and the Epoch. This formula takes account of the facts that all years that are evenly divisible by 4 are leap years, but years that are evenly divisible by 100 are not leap years unless they are also evenly divisible by 400, in which case they are leap years. This value is not the same as the ac? tual number of seconds between the time and the Epoch, because of leap seconds and because system clocks are not required to be synchronized to a standard reference. The intention is that the interpretation of seconds since the Epoch values be consistent; see POSIX.1-2008 Ratio? nale A.4.15 for further rationale.

On Linux, a call to time() with tloc specified as NULL cannot fail with the error EOVERFLOW, even on ABIs where time_t is a signed 32-bit inte? ger and the clock ticks past the time 2**31 (2038-01-19 03:14:08 UTC, ignoring leap seconds). (POSIX.1 permits, but does not require, the EOVERFLOW error in the case where the seconds since the Epoch will not fit in time_t.) Instead, the behavior on Linux is undefined when the system time is out of the time_t range. Applications intended to run after 2038 should use ABIs with time_t wider than 32 bits.

BUGS

Error returns from this system call are indistinguishable from success? ful reports that the time is a few seconds before the Epoch, so the C library wrapper function never sets errno as a result of this call.

The tloc argument is obsolescent and should always be NULL in new code. When tloc is NULL, the call cannot fail.

On some architectures, an implementation of time() is provided in the vdso(7).

SEE ALSO

date(1), gettimeofday(2), ctime(3), ftime(3), time(7), vdso(7)

COLOPHON

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