



## ***Rocky Enterprise Linux 9.2 Manual Pages on command 'ntp\_gettimex.3'***

**C:\>man ntp\_gettimex.3**

NTP\_GETTIME(3)                      Linux Programmer's Manual                      NTP\_GETTIME(3)

### NAME

ntp\_gettime, ntp\_gettimex - get time parameters (NTP daemon interface)

### SYNOPSIS

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

int ntp_gettime(struct ntptimeval *ntv);

int ntp_gettimex(struct ntptimeval *ntv);
```

### DESCRIPTION

Both of these APIs return information to the caller via the ntv argument, a struc?

ture of the following type:

```
struct ntptimeval {
    struct timeval time;     /* Current time */
    long int maxerror;     /* Maximum error */
    long int esterror;     /* Estimated error */
    long int tai;           /* TAI offset */
    /* Further padding bytes allowing for future expansion */
};
```

The fields of this structure are as follows:

time The current time, expressed as a timeval structure:

```
struct timeval {
    time_t   tv_sec; /* Seconds since the Epoch */
    suseconds_t tv_usec; /* Microseconds */
```

};

#### maxerror

Maximum error, in microseconds. This value can be initialized by ntp\_adjtime(3), and is increased periodically (on Linux: each second), but is clamped to an upper limit (the kernel constant NTP\_PHASE\_MAX, with a value of 16,000).

#### esterror

Estimated error, in microseconds. This value can be set via ntp\_adjtime(3) to contain an estimate of the difference between the system clock and the true time. This value is not used inside the kernel.

tai TAI (Atomic International Time) offset.

ntp\_gettime() returns an ntp\_timeval structure in which the time, maxerror, and esterror fields are filled in.

ntp\_gettimex() performs the same task as ntp\_gettime(), but also returns information in the tai field.

#### RETURN VALUE

The return values for ntp\_gettime() and ntp\_gettimex() are as for adjtimex(2).

Given a correct pointer argument, these functions always succeed.

#### VERSIONS

The ntp\_gettime() function is available since glibc 2.1. The ntp\_gettimex() function is available since glibc 2.12.

#### ATTRIBUTES

For an explanation of the terms used in this section, see attributes(7).

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?Interface ? Attribute ? Value ?

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?ntp\_gettime(), ntp\_gettimex() ? Thread safety ? MT-Safe ?

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#### CONFORMING TO

ntp\_gettime() is described in the NTP Kernel Application Program Interface.

ntp\_gettimex() is a GNU extension.

#### SEE ALSO

adjtimex(2) ntp\_adjtime(3), time(7)

NTP "Kernel Application Program Interface" ?[http://www.slac.stanford.edu/comp/unix/package/rtems/src/ssr1Apps/ntpNanoclock/api.htm?](http://www.slac.stanford.edu/comp/unix/package/rtems/src/ssr1Apps/ntpNanoclock/api.htm)

## COLOPHON

This page is part of release 5.05 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/>.

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