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Linux Ubuntu 26.04 Manual Pages on command 'ntp_gettime.3'

\$ man ntp_gettime.3

ntp_gettime(3) Library Functions Manual ntp_gettime(3)

NAME

ntp_gettime, ntp_gettimex - get time parameters (NTP daemon interface)

LIBRARY

Standard C library (libc, -lc)

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 structure of the following type:

```
struct ntptimeval {
    struct timeval time;   /* Current time */
    long maxerror;         /* Maximum error */
    long esterror;         /* Estimated error */
    long 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 */
```

$$\};$$

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).

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.

`ntp_gettime()` returns an `ntptimeval` structure in which the `time`, `maxerror`, and `esterror` fields are filled in.

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ntp_gettimex()

glibc 2.12.

SEE ALSO

adjtimex(2), ntp_adjtime(3), time(7)

NTP "Kernel Application Program Interface"

Linux man-pages 6.17

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