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Rocky Enterprise Linux 9.2 Manual Pages on command 'ntp_gettimex.3'

\$ man ntp_gettime.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 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 */  
    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.

fields are filled in.

`ntp_gettimeex()` 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).

?Interface ? Attribute ? Value ?

?ntp_gettime() ntp_gettimex() ? Thread safety ? MT-Safe ?

CONFORMING TO

`ntp_gettime()` is described in the NTP Kernel Application Program Interface. `ntp_gettime()` is a GNU extension.

SEE ALSO

aditime(2) ntp aditime(3) time(7)

NTP "Kernel Application Program Interface" ?<http://www.slac.stanford.edu/comp/unix/package/rtems/src/sslApps/ntpNanoclock/api.htm>?

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/>.

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