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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'ntp_gettimex.3' command

$ 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 argu?

ment, 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 in? side the kernel.

tai TAI (Atomic International Time) offset.

ntp_gettime() returns an ntptimeval structure in which the time, maxer? ror, and esterror fields are filled in.

ntp_gettimex() performs the same task as ntp_gettime(), but also re? turns information in the tai field.

RETURN VALUE

The return values for ntp_gettime() and ntp_gettimex() are as for adj? timex(2). Given a correct pointer argument, these functions always succeed.

VERSIONS

The ntp_gettime() function is available since glibc 2.1. The ntp_get? timex() function is available since glibc 2.12.

ATTRIBUTES

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

Interface	Attribute	Value
ntp_gettime(), ntp_gettimex()	Thread safety	MT-Safe

CONFORMING TO

ntp_gettime() is described in the NTP Kernel Application Program Inter? face. 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/ssrlApps/ntpNanoclock/api.htm?

COLOPHON

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