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

$ 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 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).

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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 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

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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