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

\$ man gmtime.3p

GMTIME(3P) POSIX Programmer's Manual GMTIME(3P)

PROLOG

This manual page is part of the POSIX Programmer's Manual. The Linux implementation of this interface may differ (consult the corresponding Linux manual page for details of Linux behavior), or the interface may not be implemented on Linux.

NAME

gmtime, gmtime_r ? convert a time value to a broken-down UTC time

SYNOPSIS

```
#include <time.h>

struct tm *gmtime(const time_t *timer);

struct tm *gmtime_r(const time_t *restrict timer,
                    struct tm *restrict result);
```

DESCRIPTION

For gmtime(): The functionality described on this reference page is aligned with the ISO C standard. Any conflict between the requirements described here and the ISO C standard is unintentional. This volume of POSIX.1?2017 defers to the ISO C standard.

The gmtime() function shall convert the time in seconds since the Epoch pointed to by timer into a broken-down time, expressed as Coordinated Universal Time (UTC).

The relationship between a time in seconds since the Epoch used as an argument to gmtime() and the tm structure (defined in the <time.h>

header) is that the result shall be as specified in the expression given in the definition of seconds since the Epoch (see the Base Definitions volume of POSIX.1?2017, Section 4.16, Seconds Since the Epoch), where the names in the structure and in the expression correspond.

The same relationship shall apply for `gmtime_r()`.

The `gmtime()` function need not be thread-safe.

The `asctime()`, `ctime()`, `gmtime()`, and `localtime()` functions shall return values in one of two static objects: a broken-down time structure and an array of type `char`. Execution of any of the functions may overwrite the information returned in either of these objects by any of the other functions.

The `gmtime_r()` function shall convert the time in seconds since the Epoch pointed to by `timer` into a broken-down time expressed as Coordinated Universal Time (UTC). The broken-down time is stored in the structure referred to by `result`. The `gmtime_r()` function shall also return the address of the same structure.

RETURN VALUE

Upon successful completion, the `gmtime()` function shall return a pointer to a `struct tm`. If an error is detected, `gmtime()` shall return a null pointer and set `errno` to indicate the error.

Upon successful completion, `gmtime_r()` shall return the address of the structure pointed to by the argument `result`. If an error is detected, `gmtime_r()` shall return a null pointer and set `errno` to indicate the error.

ERRORS

The `gmtime()` and `gmtime_r()` functions shall fail if:

EOVERFLOW

The result cannot be represented.

The following sections are informative.

EXAMPLES

None.

APPLICATION USAGE

The `gmtime_r()` function is thread-safe and returns values in a user-

supplied buffer instead of possibly using a static data area that may be overwritten by each call.

RATIONALE

None.

FUTURE DIRECTIONS

None.

SEE ALSO

`asctime()`, `clock()`, `ctime()`, `difftime()`, `localtime()`, `mktime()`, `strf?`

`time()`, `strptime()`, `time()`, `utime()`

The Base Definitions volume of POSIX.1?2017, Section 4.16, Seconds

Since the Epoch, `<time.h>`

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