NAME

tzset - initialize time conversion information

LIBRARY

Standard C Library (libc, -lc)

SYNOPSIS

#include <time.h>

void
tzset(*void*);

DESCRIPTION

The **tzset**() function initializes time conversion information used by the library routine localtime(3). The environment variable TZ specifies how this is done.

If TZ does not appear in the environment, the best available approximation to local wall clock time, as specified by the tzfile(5)-format file */etc/localtime* is used.

If TZ appears in the environment but its value is a null string, Coordinated Universal Time (UTC) is used (without leap second correction).

If TZ appears in the environment and its value begins with a colon (‘:’), the rest of its value is used as a pathname of a tzfile(5)-format file from which to read the time conversion information. If the first character of the pathname is a slash (‘/’) it is used as an absolute pathname; otherwise, it is used as a pathname relative to the system time conversion information directory.

If its value does not begin with a colon, it is first used as the pathname of a file (as described above) from which to read the time conversion information. If that file cannot be read, the value is then interpreted as a direct specification (the format is described below) of the time conversion information.

If the TZ environment variable does not specify a tzfile(5)-format file and cannot be interpreted as a direct specification, UTC is used.

SPECIFICATION FORMAT

When TZ is used directly as a specification of the time conversion information, it must have the following syntax (spaces inserted for clarity):

std offset [*dst* [*offset*] [, *rule*]]

Where:

std and *dst* Three or more bytes that are the designation for the standard (*std*) or summer (*dst*) time zone. Only *std* is required; if *dst* is missing, then summer time does not apply in this locale. Upper and lowercase letters are explicitly allowed. Any characters except a leading colon (‘:’), digits, comma (‘,’), minus (‘-’), plus (‘+’), and ASCII NUL are allowed.

offset Indicates the value one must add to the local time to arrive at Coordinated Universal Time. The *offset* has the form:

hh[:*mm*[:*ss*]]

The minutes (*mm*) and seconds (*ss*) are optional. The hour (*hh*) is required and may be a single digit. The *offset* following *std* is required. If no *offset* follows *dst*, summer time is assumed to be one hour ahead of standard time. One or more digits may be used; the value is always interpreted as a decimal number. The hour must be between zero and 24, and the minutes (and seconds) -- if present -- between zero and 59. If preceded by a (‘-’) the time zone shall be east of the Prime Meridian; otherwise it shall be west (which may be indicated by an optional preceding (‘+’)).

rule Indicates when to change to and back from summer time. The *rule* has the form:

date/time,date/time

where the first *date* describes when the change from standard to summer time occurs and the second *date* describes when the change back happens. Each *time* field describes when, in current local time, the change to the other time is made.

The format of *date* is one of the following:

J *n* The Julian day *n* (1 <= *n* <= 365). Leap days are not counted; that is, in all years -- including leap years -- February 28 is day 59 and March 1 is day 60. It is impossible to explicitly refer to the occasional February 29.

n The zero-based Julian day (0 <= *n* <= 365) . Leap days are counted, and it is possible to refer to February 29.

M *m.n.d* The *d*’th day (0 <= *d* <= 6) of week *n* of month *m* of the year (1 <= *n* <= 5), (1 <= *m* <= 12), where week 5 means "the last *d* day in month *m*" which

may occur in either the fourth or the fifth week). Week 1 is the first week in which the *d*'th day occurs. Day zero is Sunday.

The *time* has the same format as *offset* except that no leading sign ('-') or ('+') is allowed. The default, if *time* is not given, is **02:00:00**.

If no *rule* is present in the TZ specification, the rules specified by the tzfile(5)-format file *posixrules* in the system time conversion information directory are used, with the standard and summer time offsets from UTC replaced by those specified by the *offset* values in TZ.

For compatibility with System V Release 3.1, a semicolon (';') may be used to separate the *rule* from the rest of the specification.

FILES

/etc/localtime	local time zone file
/usr/share/zoneinfo	time zone directory
/usr/share/zoneinfo/posixrules	rules for POSIX-style TZ's
/usr/share/zoneinfo/Etc/GMT	for UTC leap seconds

If the file */usr/share/zoneinfo/UTC* does not exist, UTC leap seconds are loaded from */usr/share/zoneinfo/posixrules*.

SEE ALSO

date(1), gettimeofday(2), ctime(3), getenv(3), time(3), tzfile(5)

HISTORY

The **tzset**() function first appeared in 4.4BSD.