NAME

adjtime - correct the time to allow synchronization of the system clock

LIBRARY

Standard C Library (libc, -lc)

SYNOPSIS

#include <sys/time.h>

int
adjtime(*const struct timeval *delta*, *struct timeval *olddelta*);

DESCRIPTION

The **adjtime**() system call makes small adjustments to the system time, as returned by gettimeofday(2), advancing or retarding it by the time specified by the timeval *delta*. If *delta* is negative, the clock is slowed down by incrementing it more slowly than normal until the correction is complete. If *delta* is positive, a larger increment than normal is used. The skew used to perform the correction is generally a fraction of one percent. Thus, the time is always a monotonically increasing function. A time correction from an earlier call to **adjtime**() may not be finished when **adjtime**() is called again. If *olddelta* is not a null pointer, the structure pointed to will contain, upon return, the number of microseconds still to be corrected from the earlier call.

This call may be used by time servers that synchronize the clocks of computers in a local area network. Such time servers would slow down the clocks of some machines and speed up the clocks of others to bring them to the average network time.

The **adjtime**() system call is restricted to the super-user.

RETURN VALUES

The **adjtime**() function returns the value 0 if successful; otherwise the value -1 is returned and the global variable *errno* is set to indicate the error.

ERRORS

The **adjtime**() system call will fail if:

[EFAULT]   An argument points outside the process's allocated address space.

[EPERM]   The process's effective user ID is not that of the super-user.

SEE ALSO

date(1), gettimeofday(2)

R. Gusella and S. Zatti, *TSP: The Time Synchronization Protocol for UNIX 4.3BSD*.

HISTORY

The **adjtime**() system call appeared in 4.3BSD.