NAME

clock_getcpuclockid - obtain ID of a process CPU-time clock

SYNOPSIS

#include <time.h>

int clock_getcpuclockid(pid_t *pid***, clockid_t ****clock_id***);**

Link with *-lrt* (only for glibc versions before 2.17).

Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

clock_getcpuclockid():
_XOPEN_SOURCE >= 600 || _POSIX_C_SOURCE >= 200112L

DESCRIPTION

The **clock_getcpuclockid**() function obtains the ID of the CPU-time clock of the process whose ID is *pid*, and returns it in the location pointed to by *clock_id*. If*pid* is zero, then the cloc k ID of the CPU-time clock of the calling process is returned.

RETURN VALUE

On success, **clock_getcpuclockid**() returns 0; on error, it returns one of the positive error numbers listed in ERRORS.

ERRORS

ENOSYS
The kernel does not support obtaining the per-process CPU-time clock of another process, and *pid* does not specify the calling process.

EPERM
The caller does not have permission to access the CPU-time clock of the process specified by *pid*. (Specified as an optional error in POSIX.1-2001; does not occur on Linux unless the kernel does not support obtaining the per-process CPU-time clock of another process.)

ESRCH
There is no process with the ID *pid*.

VERSIONS

The **clock_getcpuclockid**() function is available in glibc since version 2.2.

ATTRIBUTES

Multithreading (see pthreads(7))

The **clock_getcpuclockid**() function is thread-safe.

CONFORMING TO

POSIX.1-2001.

NOTES

Calling clock_gettime(2) with the clock ID obtained by a call to **clock_getcpuclockid**() with a *pid* of 0, is the same as using the clock ID **CLOCK_PROCESS_CPUTIME_ID**.

EXAMPLE

The example program below obtains the CPU-time clock ID of the process whose ID is given on the command line, and then uses clock_gettime(2) to obtain the time on that clock. An example run is the following:

```
$ ./a.out 1 # Show CPU clock of init process
CPU-time clock for PID 1 is 2.213466748 seconds
```

Program source

```
#define _XOPEN_SOURCE 600
#include <stdio.h>
```

```
#include <unistd.h>
#include <stdlib.h>
#include <time.h>

int
main(int argc, char *argv[])
{
clockid_t clockid;
struct timespec ts;

if (argc != 2) {
fprintf(stderr, %s <process-ID>n, argv[0]);
exit(EXIT_FAILURE);
}

if (clock_getcpuclockid(atoi(argv[1]), &clockid) != 0) {
perror(clock_getcpuclockid);
exit(EXIT_FAILURE);
}

if (clock_gettime(clockid, &ts) == -1) {
perror(clock_gettime);
exit(EXIT_FAILURE);
}

printf(CPU-time clock for PID %s is %ld.%09ld secondsn,
argv[1], (long) ts.tv_sec, (long) ts.tv_nsec);
exit(EXIT_SUCCESS);
}
```

SEE ALSO

clock_getres(2), timer_create(2), pthread_getcpuclockid(3), time(7)

COLOPHON

This page is part of release 3.74 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 http://www.kernel.org/doc/man-pages/.