



## **Rocky Enterprise Linux 9.2 Manual Pages on command 'clock\_getcpuclockid.3'**

**C:\>man clock\_getcpuclockid.3**

CLOCK\_GETCPULOCKID(3)      Linux Programmer's Manual      CLOCK\_GETCPULOCKID(3)

### 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():
```

```
  _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 clock 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 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

For an explanation of the terms used in this section, see attributes(7).

????????????????????????????????????????????????????????????

?Interface ? Attribute ? Value ?

????????????????????????????????????????????????????????????

?clock\_getcpuclockid() ? Thread safety ? MT-Safe ?

????????????????????????????????????????????????????????????

#### CONFORMING TO

POSIX.1-2001, POSIX.1-2008.

#### NOTES

Calling clock\_gettime(2) with the clock ID obtained by a call to clock\_getcpu?

clockid() 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 seconds\n",
    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

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