

NAME

`sched_rr_get_interval` – get the SCHED_RR interval for the named process

SYNOPSIS

```
#include <sched.h>
```

```
int sched_rr_get_interval(pid_t pid, struct timespec *tp);
```

DESCRIPTION

`sched_rr_get_interval()` writes into the *timespec* structure pointed to by *tp* the round-robin time quantum for the process identified by *pid*. The specified process should be running under the **SCHED_RR** scheduling policy.

The *timespec* structure has the following form:

```
struct timespec {
    time_t tv_sec;      /* seconds */
    long   tv_nsec;     /* nanoseconds */
};
```

If *pid* is zero, the time quantum for the calling process is written into **tp*.

RETURN VALUE

On success, `sched_rr_get_interval()` returns 0. On error, `-1` is returned, and *errno* is set appropriately.

ERRORS**EFAULT**

Problem with copying information to user space.

EINVAL

Invalid *pid*.

ENOSYS

The system call is not yet implemented (only on rather old kernels).

ESRCH

Could not find a process with the ID *pid*.

CONFORMING TO

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

NOTES

POSIX systems on which `sched_rr_get_interval()` is available define **_POSIX_PRIORITY_SCHEDULING** in `<unistd.h>`.

Linux notes

POSIX does not specify any mechanism for controlling the size of the round-robin time quantum. Older Linux kernels provide a (nonportable) method of doing this. The quantum can be controlled by adjusting the process's nice value (see `setpriority(2)`). Assigning a negative (i.e., high) nice value results in a longer quantum; assigning a positive (i.e., low) nice value results in a shorter quantum. The default quantum is 0.1 seconds; the degree to which changing the nice value affects the quantum has varied somewhat across kernel versions. This method of adjusting the quantum was removed starting with Linux 2.6.24.

Linux 3.9 added a new mechanism for adjusting (and viewing) the **SCHED_RR** quantum: the `/proc/sys/kernel/sched_rr_timeslice_ms` file exposes the quantum as a millisecond value, whose default is 100. Writing 0 to this file resets the quantum to the default value.

SEE ALSO

`sched(7)`

COLOPHON

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