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Rocky Enterprise Linux 9.2 Manual Pages on command 'io_getevents.2'

\$ man io_getevents.2

IO_GETEVENTS(2) Linux Programmer's Manual IO_GETEVENTS(2)

NAME

io_getevents - read asynchronous I/O events from the completion queue

SYNOPSIS

```
#include <linux/aio_abi.h>            /* Defines needed types */  
  
#include <linux/time.h>            /* Defines 'struct timespec' */  
  
int io_getevents(aio_context_t ctx_id, long min_nr, long nr,  
                 struct io_event *events, struct timespec *timeout);
```

Note: There is no glibc wrapper for this system call; see NOTES.

DESCRIPTION

Note: this page describes the raw Linux system call interface. The wrapper function provided by libaio uses a different type for the ctx_id argument. See NOTES.

The io_getevents() system call attempts to read at least min_nr events and up to nr events from the completion queue of the AIO context specified by ctx_id.

The timeout argument specifies the amount of time to wait for events, and is specified as a relative timeout in a structure of the following form:

```
struct timespec {  
    time_t tv_sec;    /* seconds */  
    long tv_nsec;    /* nanoseconds [0 .. 999999999] */  
};
```

The specified time will be rounded up to the system clock granularity and is guaranteed not to expire early.

Specifying timeout as NULL means block indefinitely until at least min_nr events have been

obtained.

RETURN VALUE

On success, `io_getevents()` returns the number of events read. This may be 0, or a value less than `min_nr`, if the timeout expired. It may also be a nonzero value less than `min_nr`, if the call was interrupted by a signal handler.

For the failure return, see NOTES.

ERRORS

EFAULT Either events or timeout is an invalid pointer.

EINTR Interrupted by a signal handler; see `signal(7)`.

EINVAL `ctx_id` is invalid. `min_nr` is out of range or `nr` is out of range.

ENOSYS `io_getevents()` is not implemented on this architecture.

VERSIONS

The asynchronous I/O system calls first appeared in Linux 2.5.

CONFORMING TO

`io_getevents()` is Linux-specific and should not be used in programs that are intended to be portable.

NOTES

Glibc does not provide a wrapper function for this system call. You could invoke it using `syscall(2)`. But instead, you probably want to use the `io_getevents()` wrapper function provided by `libaio`.

Note that the `libaio` wrapper function uses a different type (`io_context_t`) for the `ctx_id` argument. Note also that the `libaio` wrapper does not follow the usual C library conventions for indicating errors: on error it returns a negated error number (the negative of one of the values listed in ERRORS). If the system call is invoked via `syscall(2)`, then the return value follows the usual conventions for indicating an error: -1, with `errno` set to a (positive) value that indicates the error.

BUGS

An invalid `ctx_id` may cause a segmentation fault instead of generating the error **EINVAL**.

SEE ALSO

`io_cancel(2)`, `io_destroy(2)`, `io_setup(2)`, `io_submit(2)`, `aio(7)`, `time(7)`

COLOPHON

This page is part of release 5.10 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 <https://www.kernel.org/doc/man-pages/>.

Linux

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