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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_con? text_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

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