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

\$ man io_setup.2

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

NAME

io_setup - create an asynchronous I/O context

SYNOPSIS

```
#include <linux/aio_abi.h>       /* Defines needed types */
```

```
long io_setup(unsigned nr_events, aio_context_t *ctx_idp);
```

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_idp argument. See NOTES.

The io_setup() system call creates an asynchronous I/O context suitable for concurrently processing nr_events operations. The ctx_idp argument must not point to an AIO context that already exists, and must be initialized to 0 prior to the call. On successful creation of the AIO context, *ctx_idp is filled in with the resulting handle.

RETURN VALUE

On success, io_setup() returns 0. For the failure return, see NOTES.

ERRORS

EAGAIN The specified `nr_events` exceeds the limit of available events, as defined in `/proc/sys/fs/aio-max-nr` (see `proc(5)`).

EFAULT An invalid pointer is passed for `ctx_idp`.

EINVAL `ctx_idp` is not initialized, or the specified `nr_events` exceeds internal limits. `nr_events` should be greater than 0.

ENOMEM Insufficient kernel resources are available.

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

VERSIONS

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

CONFORMING TO

`io_setup()` 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_setup()` wrapper function provided by `libaio`.

Note that the `libaio` wrapper function uses a different type (`io_context_t`) for the `ctx_idp` 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.

SEE ALSO

`io_cancel(2)`, `io_destroy(2)`, `io_getevents(2)`, `io_submit(2)`, `aio(7)`

COLOPHON

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