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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'ioperm.2' command

$ man ioperm.2

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

NAME

ioperm - set port input/output permissions

SYNOPSIS

#include <sys/io.h> /* for glibc */

int ioperm(unsigned long from, unsigned long num, int turn_on);

DESCRIPTION

ioperm() sets the port access permission bits for the calling thread for num bits starting from port address from. If turn_on is nonzero, then permission for the specified bits is enabled; otherwise it is dis? abled. If turn_on is nonzero, the calling thread must be privileged (CAP_SYS_RAWIO).

Before Linux 2.6.8, only the first 0x3ff I/O ports could be specified in this manner. For more ports, the iopl(2) system call had to be used (with a level argument of 3). Since Linux 2.6.8, 65,536 I/O ports can be specified.

Permissions are inherited by the child created by fork(2) (but see NOTES). Permissions are preserved across execve(2); this is useful for giving port access permissions to unprivileged programs.

This call is mostly for the i386 architecture. On many other architec? tures it does not exist or will always return an error.

RETURN VALUE

On success, zero is returned. On error, -1 is returned, and errno is

set appropriately.

ERRORS

EINVAL Invalid values for from or num.

EIO (on PowerPC) This call is not supported.

ENOMEM Out of memory.

EPERM The calling thread has insufficient privilege.

CONFORMING TO

ioperm() is Linux-specific and should not be used in programs intended to be portable.

NOTES

The /proc/ioports file shows the I/O ports that are currently allocated on the system.

Before Linux 2.4, permissions were not inherited by a child created by fork(2).

Glibc has an ioperm() prototype both in <sys/io.h> and in <sys/perm.h>.

Avoid the latter, it is available on i386 only.

SEE ALSO

iopl(2), outb(2), capabilities(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/.