NAME

s390_pci_mmio_write, s390_pci_mmio_read − transfer data to/from PCI MMIO memory page

LIBRARY

Standard C library (*libc*, *−lc*)

SYNOPSIS

#include <sys/syscall.h> /* Definition of **SYS_*** constants */
#include <unistd.h>

int syscall(SYS_s390_pci_mmio_write, unsigned long *mmio_addr***,**
const void *user_buffer***[.**_length_**], size_t** *length***);**
int syscall(SYS_s390_pci_mmio_read, unsigned long *mmio_addr***,**
void *user_buffer***[.**_length_**], size_t** *length***);**

Note: glibc provides no wrappers for these system calls, necessitating the use of **syscall**(2).

DESCRIPTION

The **s390_pci_mmio_write**() system call writes *length* bytes of data from the user-space buffer *user_buffer* to the PCI MMIO memory location specified by *mmio_addr*. The**s390_pci_mmio_r ead**() system call reads *length* bytes of data from the PCI MMIO memory location specified by *mmio_addr* to the user-space buffer *user_buffer*.

These system calls must be used instead of the simple assignment or data-transfer operations that are used to access the PCI MMIO memory areas mapped to user space on the Linux System z platform. The address specified by *mmio_addr* must belong to a PCI MMIO memory page mapping in the caller's address space, and the data being written or read must not cross a page boundary. The*length* v alue cannot be greater than the system page size.

RETURN VALUE

On success, **s390_pci_mmio_write**() and **s390_pci_mmio_read**() return 0. On failure, −1 is returned and *errno* is set to indicate the error.

ERRORS

EFAULT
The address in *mmio_addr* is invalid.

EFAULT
user_buffer does not point to a valid location in the caller's address space.

EINVAL
Invalid *length* argument.

ENODEV
PCI support is not enabled.

ENOMEM
Insufficient memory.

VERSIONS

These system calls are available since Linux 3.19.

STANDARDS

This Linux-specific system call is available only on the s390 architecture. The required PCI support is available beginning with System z EC12.

SEE ALSO

syscall(2)