NAME

vmsplice − splice user pages into a pipe

SYNOPSIS

```
#define _GNU_SOURCE
#include <fcntl.h>
#include <sys/uio.h>

long vmsplice(int fd, const struct iovec *iov,
        unsigned long nr_segs, unsigned int flags);
```

DESCRIPTION

The **vmsplice**() system call maps *nr_segs* ranges of user memory described by *iov* into a pipe. The file descriptor *fd* must refer to a pipe.

The pointer *iov* points to an array of *iovec* structures as defined in <*sys/uio.h*>:

```
struct iovec {
   void  *iov_base;     /* Starting address */
   size_t iov_len;      /* Number of bytes */
};
```

The *flags* argument is a bit mask that is composed by ORing together zero or more of the following values:

SPLICE_F_MOVE Unused for **vmsplice**(); see **splice**(2).

SPLICE_F_NONBLOCK Do not block on I/O; see **splice**(2) for further details.

SPLICE_F_MORE Currently has no effect for **vmsplice**(), but may be implemented in the future; see **splice**(2).

SPLICE_F_GIFT The user pages are a gift to the kernel. The application may not modify this memory ever, or page cache and on-disk data may differ. Gifting pages to the kernel means that a subsequent **splice**(2) **SPLICE_F_MOVE** can successfully move the pages; if this flag is not specified, then a subsequent **splice**(2) **SPLICE_F_MOVE** must copy the pages. Data must also be properly page aligned, both in memory and length.

RETURN VALUE

Upon successful completion, **vmsplice**() returns the number of bytes transferred to the pipe. On error, **vmsplice**() returns −1 and *errno* is set to indicate the error.

ERRORS

EBADF
fd either not valid, or doesn't refer to a pipe.

EINVAL
nr_segs is 0 or greater than **IOV_MAX**; or memory not aligned if **SPLICE_F_GIFT** set.

ENOMEM
Out of memory.

VERSIONS

The **vmsplice**() system call first appeared in Linux 2.6.17.

CONFORMING TO

This system call is Linux-specific.

NOTES

vmsplice() follows the other vectorized read/write type functions when it comes to limitations on number of segments being passed in. This limit is **IOV_MAX** as defined in <*limits.h*>. At the time of this writing,

that limit is 1024.

SEE ALSO

splice(2), **tee**(2), **feature_test_macros**(7)

COLOPHON

This page is part of release 3.22 of the Linux *man-pages* project. A description of the project, and information about reporting bugs, can be found at http://www.kernel.org/doc/man-pages/.