NAME

kvm_read, **kvm_read2**, **kvm_write** - read or write kernel virtual memory

LIBRARY

Kernel Data Access Library (libkvm, -lkvm)

SYNOPSIS

#include <kvm.h>

ssize_t
kvm_read(*kvm_t *kd*, *unsigned long addr*, *void *buf*, *size_t nbytes*);

ssize_t
kvm_read2(*kvm_t *kd*, *kvaddr_t addr*, *void *buf*, *size_t nbytes*);

ssize_t
kvm_write(*kvm_t *kd*, *unsigned long addr*, *const void *buf*, *size_t nbytes*);

DESCRIPTION

The **kvm_read**(), **kvm_read2**(), and **kvm_write**() functions are used to read and write kernel virtual memory (or a crash dump file). See **kvm_open**(*3*) for information regarding opening kernel virtual memory and crash dumps.

The **kvm_read**() and **kvm_read2**() functions transfer *nbytes* bytes of data from the kernel space address *addr* to *buf*. Conversely, **kvm_write**() transfers data from *buf* to *addr*. Unlike their SunOS counterparts, these functions cannot be used to read or write process address spaces.

The **kvm_read2**() function uses a different type (*kvaddr_t*) for the *addr* argument to allow use of addresses larger than ULONG_MAX when examining non-native kernel images.

RETURN VALUES

Upon success, the number of bytes actually transferred is returned. Otherwise, -1 is returned.

SEE ALSO

kvm(3), kvm_close(3), kvm_getargv(3), kvm_getenvv(3), kvm_geterr(3), kvm_getprocs(3), kvm_nlist(3), kvm_open(3), kvm_openfiles(3)

HISTORY

The **kvm_read2**() function first appeared in FreeBSD 11.0.