

NAME

kvm_nlist, **kvm_nlist2** - retrieve symbol table names from a kernel image

LIBRARY

Kernel Data Access Library (libkvm, -lkvm)

SYNOPSIS

```
#include <kvm.h>
```

```
#include <nlist.h>
```

int

```
kvm_nlist(kvm_t *kd, struct nlist *nl);
```

int

```
kvm_nlist2(kvm_t *kd, struct kvm_nlist *nl);
```

DESCRIPTION

The **kvm_nlist()** function retrieves the symbol table entries indicated by the name list argument *nl*. This argument points to an array of *nlist* structures, terminated by an entry whose *n_name* field is NULL (see *nlist(3)*). Each symbol is looked up using the *n_name* field, and if found, the corresponding *n_type* and *n_value* fields are filled in. These fields are set to 0 if the symbol is not found.

The *kldsym(2)* system call is used to locate symbols in live kernels. This is a less than perfect emulation of the *nlist* values but has the advantage of being aware of kernel modules and is reasonably fast.

The **kvm_nlist2()** function retrieves the symbol table entries indicated by the name list argument *nl*. This argument points to an array of *struct kvm_nlist* structures, terminated by an entry whose *n_name* field is NULL. These structures are similar to the *nlist* structures used by **kvm_nlist()** except that the *n_value* field uses a different type (*kvaddr_t*) to avoid truncation when examining non-native kernel images.

RETURN VALUES

The **kvm_nlist()** and **kvm_nlist2()** functions return the number of invalid entries found. If the kernel symbol table was unreadable, -1 is returned.

SEE ALSO

kldsym(2), *kvm(3)*, *kvm_close(3)*, *kvm_getargv(3)*, *kvm_getenvv(3)*, *kvm_geterr(3)*, *kvm_getprocs(3)*, *kvm_native(3)*, *kvm_open(3)*, *kvm_openfiles(3)*, *kvm_read(3)*, *kvm_write(3)*

HISTORY

The **kvm_nlist2()** function first appeared in FreeBSD 11.0.