NAME

query_module − query the kernel for various bits pertaining to modules

SYNOPSIS

#include <linux/module.h>

int query_module(const char ****name*, int** *which***, void *****buf***,**
size_t *bufsize***, size_t *****ret***);**

DESCRIPTION

query_module() requests information from the kernel about loadable modules. The returned information is placed in the buffer pointed to by *buf*. The caller must specify the size of *buf* in *bufsize*. The precise nature and format of the returned information depend on the operation specified by *which*. Some operations require *name* to identify a currently loaded module, some allow *name* to be NULL, indicating the kernel proper.

The following values can be specified for *which*:

0 Returns success, if the kernel supports **query_module**(). Used to probe for availability of the system call.

QM_MODULES
Returns the names of all loaded modules. The returned buffer consists of a sequence of null-terminated strings; *ret* is set to the number of modules.

QM_DEPS
Returns the names of all modules used by the indicated module. The returned buffer consists of a sequence of null-terminated strings; *ret* is set to the number of modules.

QM_REFS
Returns the names of all modules using the indicated module. This is the inverse of **QM_DEPS**. The returned buffer consists of a sequence of null-terminated strings; *ret* is set to the number of modules.

QM_SYMBOLS
Returns the symbols and values exported by the kernel or the indicated module. The returned buffer is an array of structures of the following form

```
struct module_symbol {
  unsigned long value;
  unsigned long name;
};
```

followed by null-terminated strings. The value of *name* is the character offset of the string relative to the start of *buf*; *ret* is set to the number of symbols.

QM_INFO
Returns miscellaneous information about the indicated module. The output buffer format is:

```
struct module_info {
  unsigned long address;
  unsigned long size;
  unsigned long flags;
};
```

where *address* is the kernel address at which the module resides, *size* is the size of the module in bytes, and *flags* is a mask of **MOD_RUNNING**, **MOD_AUTOCLEAN**, etc. that indicates the current status of the module (see the kernel source file *include/linux/module.h*). *ret* is set to the size of the *module_info* structure.

RETURN VALUE

On success, zero is returned. On error, −1 is returned and *errno* is set appropriately.

ERRORS

EFAULT

At least one of *name*, *buf* , or *ret* was outside the program's accessible address space.

EINVAL

Invalid *which*; or *name* is NULL (indicating "the kernel"), but this is not permitted with the specified value of *which*.

ENOENT

No module by that *name* exists.

ENOSPC

The buffer size provided was too small. *ret* is set to the minimum size needed.

ENOSYS

query_module() is not supported in this version of the kernel.

CONFORMING TO

query_module() is Linux-specific.

NOTES

This system call is only present on Linux up until kernel 2.4; it was removed in Linux 2.6. Some of the information that was available via **query_module**() can be obtained from */proc/modules*, */proc/kallsyms*, and */sys/modules*.

SEE ALSO

create_module(2), **delete_module**(2), **get_kernel_syms**(2), **init_module**(2)

COLOPHON

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