

NAME

`init_module` – initialize a loadable module entry

SYNOPSIS

```
#include <linux/module.h>
```

```
int init_module(const char *name, struct module *image);
```

DESCRIPTION

init_module() loads the relocated module image into kernel space and runs the module's *init* function.

The module image begins with a module structure and is followed by code and data as appropriate. The module structure is defined as follows:

```
struct module {
    unsigned long    size_of_struct;
    struct module    *next;
    const char       *name;
    unsigned long    size;
    long             usecount;
    unsigned long    flags;
    unsigned int     nsyms;
    unsigned int     ndeps;
    struct module_symbol *syms;
    struct module_ref *deps;
    struct module_ref *refs;
    int              (*init)(void);
    void              (*cleanup)(void);
    const struct exception_table_entry *ex_table_start;
    const struct exception_table_entry *ex_table_end;
#ifdef __alpha__
    unsigned long gp;
#endif
};
```

All of the pointer fields, with the exception of *next* and *refs*, are expected to point within the module body and be initialized as appropriate for kernel space, that is, relocated with the rest of the module.

This system call requires privilege.

RETURN VALUE

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

ERRORS**EBUSY**

The module's initialization routine failed.

EFAULT

name or *image* is outside the program's accessible address space.

EINVAL

Some *image* slot is filled in incorrectly, *image->name* does not correspond to the original module name, some *image->deps* entry does not correspond to a loaded module, or some other similar inconsistency.

ENOENT

No module by that name exists.

EPERM

The caller was not privileged (did not have the **CAP_SYS_MODULE** capability).

CONFORMING TO

init_module() is Linux-specific.

SEE ALSO

create_module(2), **delete_module(2)**, **query_module(2)**

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/>.