

NAME

kenv - kernel environment

LIBRARY

Standard C Library (libc, -lc)

SYNOPSIS

```
#include <kenv.h>
```

int

```
kenv(int action, const char *name, char *value, int len);
```

DESCRIPTION

The **kenv()** system call manipulates kernel environment variables. It supports the well known userland actions of getting, setting and unsetting environment variables, as well as the ability to dump all of the entries in the kernel environment.

The *action* argument can be one of the following:

- | | |
|------------------|--|
| KENV_GET | Get the <i>value</i> of the variable with the given <i>name</i> . The size of the <i>value</i> buffer is given by <i>len</i> , which should be at least KENV_MVALLEN + 1 bytes to avoid truncation and to ensure NUL termination. |
| KENV_SET | Set or add a variable. The <i>name</i> and <i>value</i> are limited to KENV_MNAMELEN and KENV_MVALLEN characters, respectively (not including the NUL terminator.) The <i>len</i> argument indicates the length of the <i>value</i> and must include the NUL terminator. This option is only available to the superuser. |
| KENV_UNSET | Unset the variable with the given <i>name</i> . The <i>value</i> and <i>len</i> arguments are ignored. This option is only available to the superuser. |
| KENV_DUMP | Dump as much of the dynamic kernel environment as will fit in <i>value</i> , whose size is given in <i>len</i> . If <i>value</i> is NULL, kenv() will return the number of bytes required to copy out the entire environment. The <i>name</i> is ignored. |
| KENV_DUMP_LOADER | Dump the static environment provided by loader(8), with semantics identical to KENV_DUMP. Duplicate and malformed variables originally present in this environment are discarded by the kernel and will not appear in the output. |

KENV_DUMP_STATIC Dump the static environment defined by the kernel config(5). The semantics are identical to **KENV_DUMP_LOADER**.

RETURN VALUES

The **kenv()** system call returns 0 if successful in the case of **KENV_SET** and **KENV_UNSET**, and the number of bytes copied into *value* in the case of **KENV_DUMP** and **KENV_GET**. If an error occurs, a value of -1 is returned and the global variable *errno* is set to indicate the error.

ERRORS

The **kenv()** system call will fail if:

- | | |
|----------------|---|
| [EINVAL] | The <i>action</i> argument is not a valid option, or the length of the <i>value</i> is less than 1 for a KENV_SET . |
| [ENOENT] | No value could be found for <i>name</i> for a KENV_GET or KENV_UNSET . |
| [ENOENT] | The requested environment is not available for a KENV_DUMP_LOADER or KENV_DUMP_STATIC . The kernel is configured to destroy these environments by default. |
| [EPERM] | A user other than the superuser attempted to set or unset a kernel environment variable. |
| [EFAULT] | A bad address was encountered while attempting to copy in user arguments or copy out value(s). |
| [ENAMETOOLONG] | The <i>name</i> or the <i>value</i> is longer than KENV_MNAMELEN or KENV_MVALLEN characters, respectively, or <i>len</i> did not include the NUL terminator for a KENV_SET . |

SEE ALSO

kenv(1)

AUTHORS

This manual page was written by Chad David <davidc@FreeBSD.org>.

The **kenv()** system call was written by Maxime Henrion <mux@FreeBSD.org>.