

NAME

caph_limit_stream, **caph_limit_stdin**, **caph_limit_stderr**, **caph_limit_stdout**, **caph_limit_stdio**, **caph_stream_rights**, **caph_cache_tzdata**, **caph_cache_catpages**, **caph_enter**, **caph_enter_casper**, **caph_rights_limit**, **caph_ioctls_limit**, **caph_fcntls_limit** - set of the capsicum helpers, part of the libcapsicum

LIBRARY

library "libcapsicum"

SYNOPSIS

```
#include <capsicum_helpers.h>
```

int

```
caph_enter(void);
```

int

```
caph_enter_casper(void);
```

int

```
caph_rights_limit(int fd, const cap_rights_t *rights);
```

int

```
caph_ioctls_limit(int fd, const unsigned long *cmds, size_t ncmds);
```

int

```
caph_fcntls_limit(int fd, uint32_t fcntlrights);
```

int

```
caph_limit_stream(int fd, int flags);
```

int

```
caph_limit_stdin(void);
```

int

```
caph_limit_stderr(void);
```

int

```
caph_limit_stdout(void);
```

int

caph_limit_stdio(*void*);

void

caph_stream_rights(*cap_rights_t **, *int flags*);

void

caph_cache_tzdata(*void*);

void

caph_cache_catpages(*void*);

DESCRIPTION

The **caph_enter**, **caph_rights_limit**, **caph_ioctls_limit** and **caph_fcntl_limit** are respectively equivalent to `cap_enter(2)`, `cap_rights_limit(2)`, `cap_ioctls_limit(2)` and `cap_fcntl_limit(2)`, it returns success when the kernel is built without support of the capability mode.

The **caph_enter_casper** is equivalent to the **caph_enter** it returns success when the system is built without Casper support.

The **capsicum helpers** are a set of inline functions which simplify modifying programs to use Capsicum. The goal is to reduce duplicated code patterns. The **capsicum helpers** are part of **libcapsicum** but there is no need to link to the library.

caph_limit_stream() restricts capabilities on *fd* to only those needed by POSIX stream objects (that is, FILEs).

These flags can be provided:

CAPH_IGNORE_EBADF	Do not return an error if file descriptor is invalid.
CAPH_READ	Set <code>CAP_READ</code> on limited descriptor.
CAPH_WRITE	Set <code>CAP_WRITE</code> on limited descriptor.

caph_limit_stdin(), **caph_limit_stderr**() and **caph_limit_stdout**() limit standard descriptors using the **caph_limit_stream** function.

caph_limit_stdio() limits `stdin`, `stderr` and `stdout`.

caph_stream_rights may be used to initialize *rights* with the same rights that a stream would be limited to, as if **caph_limit_stream**() had been invoked using the same *flags*.

caph_cache_tzdata() precaches all timezone data needed to use libc local time functions.

caph_cache_catpages() caches Native Language Support (NLS) data. NLS data is used for localized error printing by `strerror(3)` and `err(3)`, among others.

SEE ALSO

`cap_enter(2)`, `cap_rights_limit(2)`, `rights(4)`