

NAME

accept_filter, accept_filt_add, accept_filt_del, accept_filt_generic_mod_event, accept_filt_get - filter incoming connections

SYNOPSIS

```
#include <sys/types.h>
```

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

```
#include <sys/socket.h>
```

```
#define ACCEPT_FILTER_MOD
```

```
#include <sys/socketvar.h>
```

```
int
```

```
accept_filt_add(struct accept_filter *filt);
```

```
int
```

```
accept_filt_del(char *name);
```

```
int
```

```
accept_filt_generic_mod_event(module_t mod, int event, void *data);
```

```
struct accept_filter *
```

```
accept_filt_get(char *name);
```

DESCRIPTION

Accept filters allow an application to request that the kernel pre-process incoming connections. An accept filter is requested via the `setsockopt(2)` system call, passing in an *optname* of `SO_ACCEPTFILTER`.

IMPLEMENTATION NOTES

A module that wants to be an accept filter must provide a *struct accept_filter* to the system:

```
struct accept_filter {
    char    accf_name[16];
    void    (*accf_callback)(struct socket *so, void *arg, int waitflag);
    void *  (*accf_create)(struct socket *so, char *arg);
    void    (*accf_destroy)(struct socket *so);
    SLIST_ENTRY(accept_filter) accf_next;    /* next on the list */
};
```

The module should register it with the function **accept_filt_add()**, passing a pointer to a *struct accept_filter*, allocated with `malloc(9)`.

The fields of *struct accept_filter* are as follows:

accf_name Name of the filter; this is how it will be accessed from userland.

accf_callback The callback that the kernel will do once the connection is established. It is the same as a socket upcall and will be called when the connection is established and whenever new data arrives on the socket, unless the callback modifies the socket's flags.

accf_create Called whenever a `setsockopt(2)` installs the filter onto a listening socket.

accf_destroy Called whenever the user removes the accept filter on the socket.

The **accept_filt_del()** function passed the same string used in *accept_filter.accf_name* during registration with **accept_filt_add()**, the kernel will then disallow and further userland use of the filter.

The **accept_filt_get()** function is used internally to locate which accept filter to use via the `setsockopt(2)` system call.

The **accept_filt_generic_mod_event()** function provides a simple way to avoid duplication of code for accept filters which do not use the argument field to load and unload themselves. This function can be used in the *moduledata_t* struct for the `DECLARE_MODULE(9)` macro.

SEE ALSO

`setsockopt(2)`, `accf_data(9)`, `accf_dns(9)`, `accf_http(9)`, `malloc(9)`

HISTORY

The accept filter mechanism was introduced in FreeBSD 4.0.

AUTHORS

This manual page was written by Alfred Perlstein, Sheldon Hearn and Jeroen Ruigrok van der Werven.

The accept filter concept was pioneered by David Filo at Yahoo! and refined to be a loadable module system by Alfred Perlstein.