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Rocky Enterprise Linux 9.2 Manual Pages on command 'sigsemptyset.3'

\$ man sigsemptyset.3

SIGSETOPTS(3) Linux Programmer's Manual SIGSETOPTS(3)

NAME

sigemptyset, sigfillset, sigaddset, sigdelset, sigismember - POSIX signal set operations

SYNOPSIS

```
#include <signal.h>

int sigemptyset(sigset_t *set);
int sigfillset(sigset_t *set);
int sigaddset(sigset_t *set, int signum);
int sigdelset(sigset_t *set, int signum);
int sigismember(const sigset_t *set, int signum);
```

Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

```
sigemptyset(), sigfillset(), sigaddset(), sigdelset(), sigismember():
    _POSIX_C_SOURCE
```

DESCRIPTION

These functions allow the manipulation of POSIX signal sets. sigemptyset() initializes the signal set given by set to empty, with all signals excluded from the set.

sigfillset() initializes set to full, including all signals.

sigaddset() and sigdelset() add and delete respectively signal `signum` from set.

sigismember() tests whether `signum` is a member of set.

Objects of type `sigset_t` must be initialized by a call to either `sigemptyset()` or `sigfillset()` before being passed to the functions `sigaddset()`, `sigdelset()`, and `sigismember()` or the additional glibc functions described below (`sigisemptyset()`, `sigandset()`, and `sigorset()`). The results are undefined if this is not done.

RETURN VALUE

`sigemptyset()`, `sigfillset()`, `sigaddset()`, and `sigdelset()` return 0 on success and -1 on error.

`sigismember()` returns 1 if `signum` is a member of set, 0 if `signum` is not a member, and -1 on error.

On error, these functions set `errno` to indicate the cause of the error.

ERRORS

EINVAL `signum` is not a valid signal.

ATTRIBUTES

For an explanation of the terms used in this section, see [attributes\(7\)](#).

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?Interface ? Attribute ? Value ?

??

?sigemptyset(), sigfillset(), ? Thread safety ? MT-Safe ?

?sigaddset(), sigdelset(), ? ? ?

?sigismember(), sigisemptyset(), ? ? ?

?sigorset(), sigandset() ? ? ?

??

CONFORMING TO

POSIX.1-2001, POSIX.1-2008.

NOTES

When creating a filled signal set, the glibc `sigfillset()` function does not include the two real-time signals used internally by the NPTL

threading implementation. See `nptl(7)` for details.

Glibc extensions

If the `_GNU_SOURCE` feature test macro is defined, then `<signal.h>` ex?

poses three other functions for manipulating signal sets:

```
int sigisemptyset(const sigset_t *set);
```

```
int sigorset(sigset_t *dest, const sigset_t *left,  
             const sigset_t *right);
```

```
int sigandset(sigset_t *dest, const sigset_t *left,  
             const sigset_t *right);
```

`sigisemptyset()` returns 1 if set contains no signals, and 0 otherwise.

`sigorset()` places the union of the sets `left` and `right` in `dest`.

`sigandset()` places the intersection of the sets `left` and `right` in `dest`.

Both functions return 0 on success, and -1 on failure.

These functions are nonstandard (a few other systems provide similar functions) and their use should be avoided in portable applications.

SEE ALSO

`sigaction(2)`, `sigpending(2)`, `sigprocmask(2)`, `sigsuspend(2)`

COLOPHON

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