



Red Hat Enterprise Linux Release 9.2 Manual Pages on 'sigsetops.3' command

\$ man sigsetops.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).

??

?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> exposes 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

This page is part of release 5.10 of the Linux man-pages project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at <https://www.kernel.org/doc/man-pages/>.

Linux 2020-12-21 SIGSETOPS(3)