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

\$ man sigset.3

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

NAME

sigset, sighold, sigrelse, sigignore - System V signal API

SYNOPSIS

```
#include <signal.h>

typedef void (*sighandler_t)(int);

sighandler_t sigset(int sig, sighandler_t disp);

int sighold(int sig);

int sigrelse(int sig);

int sigignore(int sig);
```

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

```
sigset(), sighold(), sigrelse(), sigignore():

    _XOPEN_SOURCE >= 500
```

DESCRIPTION

These functions are provided in glibc as a compatibility interface for programs that make use of the historical System V signal API. This API is obsolete: new applications should use the POSIX signal API (sigaction(2), sigprocmask(2), etc.)

The `sigset()` function modifies the disposition of the signal `sig`. The `disp` argument can be the address of a signal handler function, or one of the following constants:

`SIG_DFL`

Reset the disposition of `sig` to the default.

`SIG_IGN`

Ignore `sig`.

`SIG_HOLD`

Add `sig` to the process's signal mask, but leave the disposition of `sig` unchanged.

If `disp` specifies the address of a signal handler, then `sig` is added to the process's signal mask during execution of the handler.

If `disp` was specified as a value other than `SIG_HOLD`, then `sig` is removed from the process's signal mask.

The dispositions for `SIGKILL` and `SIGSTOP` cannot be changed.

The `sighold()` function adds `sig` to the calling process's signal mask.

The `sigrelse()` function removes `sig` from the calling process's signal mask.

The `sigignore()` function sets the disposition of `sig` to `SIG_IGN`.

RETURN VALUE

On success, `sigset()` returns `SIG_HOLD` if `sig` was blocked before the call, or the signal's previous disposition if it was not blocked before the call. On error, `sigset()` returns `-1`, with `errno` set to indicate the error. (But see `BUGS` below.)

The `sighold()`, `sigrelse()`, and `sigignore()` functions return `0` on success; on error, these functions return `-1` and set `errno` to indicate the error.

ERRORS

For `sigset()` see the `ERRORS` under `sigaction(2)` and `sigprocmask(2)`.

For `sighold()` and `sigrelse()` see the `ERRORS` under `sigprocmask(2)`.

For `sigignore()`, see the errors under `sigaction(2)`.

ATTRIBUTES

For an explanation of the terms used in this section, see at?

tributes(7).

??

?Interface ? Attribute ? Value ?

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?sigset(), sighold(), ? Thread safety ? MT-Safe ?

?sigrelse(), sigignore() ? ? ?

??

CONFORMING TO

SVr4, POSIX.1-2001, POSIX.1-2008. These functions are obsolete: do not use them in new programs. POSIX.1-2008 marks sighold(), sigignore(), sigpause(3), sigrelse(), and sigset() as obsolete, recommending the use of sigaction(2), sigprocmask(2), pthread_sigmask(3), and sigsuspend(2) instead.

NOTES

These functions appeared in glibc version 2.1.

The sighandler_t type is a GNU extension; it is used on this page only to make the sigset() prototype more easily readable.

The sigset() function provides reliable signal handling semantics (as when calling sigaction(2) with sa_mask equal to 0).

On System V, the signal() function provides unreliable semantics (as when calling sigaction(2) with sa_mask equal to SA_RESETHAND | SA_NODEFER). On BSD, signal() provides reliable semantics. POSIX.1-2001 leaves these aspects of signal() unspecified. See signal(2) for further details.

In order to wait for a signal, BSD and System V both provided a function named sigpause(3), but this function has a different argument on the two systems. See sigpause(3) for details.

BUGS

In versions of glibc before 2.2, sigset() did not unblock sig if disp was specified as a value other than SIG_HOLD.

In versions of glibc before 2.5, sigset() does not correctly return the previous disposition of the signal in two cases. First, if disp is specified as SIG_HOLD, then a successful sigset() always returns

SIG_HOLD. Instead, it should return the previous disposition of the signal (unless the signal was blocked, in which case SIG_HOLD should be returned). Second, if the signal is currently blocked, then the return value of a successful sigset() should be SIG_HOLD. Instead, the previous disposition of the signal is returned. These problems have been fixed since glibc 2.5.

SEE ALSO

kill(2), pause(2), sigaction(2), signal(2), sigprocmask(2), raise(3), sigpause(3), sigvec(3), signal(7)

COLOPHON

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