NAME

sigsuspend, rt_sigsuspend − wait for a signal

SYNOPSIS

#include <signal.h>

int sigsuspend(const sigset_t **mask*);

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

sigsuspend(): _POSIX_C_SOURCE

DESCRIPTION

sigsuspend() temporarily replaces the signal mask of the calling thread with the mask given by *mask* and then suspends the thread until delivery of a signal whose action is to invoke a signal handler or to terminate a process.

If the signal terminates the process, then **sigsuspend**() does not return. If the signal is caught, then **sigsuspend**() returns after the signal handler returns, and the signal mask is restored to the state before the call to **sigsuspend**().

It is not possible to block **SIGKILL** or **SIGSTOP**; specifying these signals in *mask*, has no effect on the thread's signal mask.

RETURN VALUE

sigsuspend() always returns −1, with *errno* set to indicate the error (normally, **EINTR**).

ERRORS

EFAULT

mask points to memory which is not a valid part of the process address space.

EINTR

The call was interrupted by a signal; **signal**(7).

CONFORMING TO

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

NOTES

Normally, **sigsuspend**() is used in conjunction with **sigprocmask**(2) in order to prevent delivery of a signal during the execution of a critical code section. The caller first blocks the signals with **sigprocmask**(2). When the critical code has completed, the caller then waits for the signals by calling **sigsuspend**() with the signal mask that was returned by **sigprocmask**(2) (in the *oldset* argument).

See **sigsetops**(3) for details on manipulating signal sets.

C library/kernel differences

The original Linux system call was named **sigsuspend**(). However, with the addition of real-time signals in Linux 2.2, the fixed-size, 32-bit *sigset_t* type supported by that system call was no longer fit for purpose. Consequently, a new system call, **rt_sigsuspend**(), was added to support an enlarged *sigset_t* type. The new system call takes a second argument, *size_t sigsetsize*, which specifies the size in bytes of the signal set in *mask*. This argument is currently required to have the value *sizeof(sigset_t)* (or the error **EINVAL** results). The glibc **sigsuspend**() wrapper function hides these details from us, transparently calling **rt_sigsuspend**() when the kernel provides it.

SEE ALSO

kill(2), **pause**(2), **sigaction**(2), **signal**(2), **sigprocmask**(2), **sigwaitinfo**(2), **sigsetops**(3), **sigwait**(3), **signal**(7)

COLOPHON

This page is part of release 5.05 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/.