

NAME

sigwait - select a set of signals

LIBRARY

Standard C Library (libc, -lc)

SYNOPSIS

```
#include <signal.h>
```

int

```
sigwait(const sigset_t * restrict set, int * restrict sig);
```

DESCRIPTION

The **sigwait()** system call selects a set of signals, specified by *set*. If none of the selected signals are pending, **sigwait()** waits until one or more of the selected signals has been generated. Then **sigwait()** atomically clears one of the selected signals from the set of pending signals (for the process or for the current thread) and sets the location pointed to by *sig* to the signal number that was cleared.

The signals specified by *set* should be blocked at the time of the call to **sigwait()**.

If more than one thread is using **sigwait()** to wait for the same signal, no more than one of these threads will return from **sigwait()** with the signal number. If more than a single thread is blocked in **sigwait()** for a signal when that signal is generated for the process, it is unspecified which of the waiting threads returns from **sigwait()**. If the signal is generated for a specific thread, as by **pthread_kill()**, only that thread will return.

Should any of the multiple pending signals in the range SIGRTMIN to SIGRTMAX be selected, it will be the lowest numbered one. The selection order between realtime and non-realtime signals, or between multiple pending non-realtime signals, is unspecified.

IMPLEMENTATION NOTES

The **sigwait()** function is implemented as a wrapper around the **__sys_sigwait()** system call, which retries the call on EINTR error.

RETURN VALUES

If successful, **sigwait()** returns 0 and sets the location pointed to by *sig* to the cleared signal number. Otherwise, an error number is returned.

ERRORS

The **sigwait()** system call will fail if:

[EINVAL] The *set* argument specifies one or more invalid signal numbers.

SEE ALSO

sigaction(2), sigpending(2), sigqueue(2), sigsuspend(2), sigtimedwait(2), sigwaitinfo(2), pause(3),
pthread_sigmask(3)

STANDARDS

The **sigwait()** function conforms to ISO/IEC 9945-1:1996 ("POSIX.1").