NAME

waitid – wait for child process to change state

SYNOPSIS

#include <sys/types.h>
#include <wait.h>

int waitid(idtype_t *idtype***, id_t** *id***, siginfo_t** **infop***, int** *options***);**

DESCRIPTION

waitid( ) suspends the calling process until one of its children changes state. It records the current state of a child in the structure pointed to by *infop*. If a child process changed state prior to the call to **waitid( )**, **waitid( )** returns immediately.

The *idtype* and *id* arguments specify which children **waitid( )** is to wait for.

> If *idtype* is **P_PID**, **waitid( )** waits for the child with a process ID equal to **(pid_t)** *id*.
>
> If *idtype* is **P_PGID**, **waitid( )** waits for any child with a process group ID equal to **(pid_t)***id*.
>
> If *idtype* is **P_ALL**, **waitid( )** waits for any child and *id* is ignored.

The *options* argument is used to specify which state changes **waitid( )** is to wait for. It is formed by an OR of any of the following flags:

WCONTINUED	Return the status for any child that was stopped and has been continued.
WEXITED	Wait for process(es) to exit.
WNOHANG	Return immediately.
WNOWAIT	Keep the process in a waitable state.
WSTOPPED	Wait for and return the process status of any child that has stopped upon receipt of a signal.
WTRAPPED	Wait for traced process(es) to become trapped or reach a breakpoint (see **ptrace**(2)).

infop must point to a **siginfo_t** structure, as defined in **siginfo**(5). **siginfo_t** is filled in by the system with the status of the process being waited for.

waitid( ), with *idtype* equal to **P_ALL** and *options* equal to **WEXITED|WTRAPPED**, is equivalent to **wait**(2).

RETURN VALUES

If **waitid( )** returns due to a change of state of one of its children, a value of 0 is returned. Otherwise, a value of −1 is returned and **errno** is set to indicate the error.

ERRORS

waitid( ) fails if one or more of the following is true.

ECHILD	The set of processes specified by *idtype* and *id* does not contain any unwaited-for processes.
EFAULT	*infop* points to an illegal address.

EINTR **waitid( )** was interrupted due to the receipt of a signal by the calling process.

EINVAL An invalid value was specified for *options*.

EINVAL *idtype* and *id* specify an invalid set of processes.

SEE ALSO

intro(2), **exec**(2), **exit**(2), **fork**(2), **pause**(2), **ptrace**(2), **sigaction**(2), **wait**(2), **signal**(3C), **siginfo**(5)