NAME

wait3, wait4 − wait for process to change state, BSD style

SYNOPSIS

```
#include <sys/types.h>
#include <sys/time.h>
#include <sys/resource.h>
#include <sys/wait.h>

pid_t wait3(int *wstatus, int options,
        struct rusage *rusage);

pid_t wait4(pid_t pid, int *wstatus, int options,
        struct rusage *rusage);
```

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

wait3():
  Since glibc 2.19:
    _DEFAULT_SOURCE || _XOPEN_SOURCE >= 500
  Glibc 2.19 and earlier:
    _BSD_SOURCE || _XOPEN_SOURCE >= 500
wait4():
  Since glibc 2.19:
    _DEFAULT_SOURCE
  Glibc 2.19 and earlier:
    _BSD_SOURCE

DESCRIPTION

These functions are obsolete; use **waitpid**(2) or **waitid**(2) in new programs.

The **wait3**() and **wait4**() system calls are similar to **waitpid**(2), but additionally return resource usage information about the child in the structure pointed to by *rusage*.

Other than the use of the *rusage* argument, the following **wait3**() call:

```
wait3(wstatus, options, rusage);
```

is equivalent to:

```
waitpid(−1, wstatus, options);
```

Similarly, the following **wait4**() call:

```
wait4(pid, wstatus, options, rusage);
```

is equivalent to:

```
waitpid(pid, wstatus, options);
```

In other words, **wait3**() waits of any child, while **wait4**() can be used to select a specific child, or children, on which to wait. See **wait**(2) for further details.

If *rusage* is not NULL, the *struct rusage* to which it points will be filled with accounting information about the child. See **getrusage**(2) for details.

RETURN VALUE

As for **waitpid**(2).

ERRORS

As for **waitpid**(2).

CONFORMING TO

4.3BSD.

SUSv1 included a specification of **wait3**(); SUSv2 included **wait3**(), but marked it LEGACY; SUSv3 removed it.

NOTES

Including <*sys/time.h*> is not required these days, but increases portability. (Indeed, <*sys/resource.h*> defines the *rusage* structure with fields of type *struct timeval* defined in <*sys/time.h*>.)

C library/kernel differences

On Linux, **wait3**() is a library function implemented on top of the **wait4**() system call.

SEE ALSO

fork(2), **getrusage**(2), **sigaction**(2), **signal**(2), **wait**(2), **signal**(7)

COLOPHON

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