

NAME

tcgetwinsize, **tcsetwinsize** - get, set the size of a terminal window

LIBRARY

Standard C Library (libc, -lc)

SYNOPSIS

```
#include <termios.h>
```

```
struct winsize {
    unsigned short    ws_row;           /* number of rows, in characters */
    unsigned short    ws_col;           /* number of columns, in characters */
    unsigned short    ws_xpixel;       /* horizontal size, in pixels */
    unsigned short    ws_ypixel;       /* vertical size, in pixels */
};
```

int

```
tcgetwinsize(int fd, struct winsize *w);
```

int

```
tcsetwinsize(int fd, const struct winsize *w);
```

DESCRIPTION

The **tcgetwinsize()** function gets the terminal window size of the terminal of which *fd* is an open file descriptor and stores it in the *winsize* structure of which *w* is a pointer.

The **tcsetwinsize()** function sets the terminal window size of the terminal of which *fd* is an open file descriptor from the *winsize* structure referenced by *w*. The change occurs immediately. If the terminal window size of the terminal is changed successfully to have a value that is different from the value that it had before the **tcsetwinsize()** call, then the SIGWINCH signal is sent to all those members of the foreground process group of the terminal that have the terminal as their controlling terminal.

The above declaration of *struct winsize* may not be literal. It is provided only to list the accessible members. Therefore, before calling **tcsetwinsize()**, the members of the *winsize* structure must be initialized by calling **tcgetwinsize()**. The information in a *winsize* structure is stored by the kernel in order to provide a consistent interface, but it is not used by the kernel.

RETURN VALUE

The **tcgetwinsize()** and **tcsetwinsize()** functions return the value 0 if successful; otherwise the value -1 is returned and the global variable *errno* is set to indicate the error. The terminal window size remains

unchanged if **tcsetwinsize()** fails.

ERRORS

The following are the possible failure conditions:

- | | |
|----------|--|
| [EBADF] | The <i>fd</i> argument to tcgetwinsize() or to tcsetwinsize() is not a valid file descriptor. |
| [ENOTTY] | The <i>fd</i> argument to tcgetwinsize() or to tcsetwinsize() is not associated with a character special device. |
| [EINVAL] | The <i>w</i> argument to tcsetwinsize() is not valid. |
| [EFAULT] | The <i>w</i> argument to tcgetwinsize() or to tcsetwinsize() points outside the process's allocated address space. |

SEE ALSO

stty(1), ioctl(2), sigaction(2), termios(4), tty(4)

STANDARDS

The **tcgetwinsize()** and **tcsetwinsize()** functions are expected to conform to IEEE Std 1003.1 ("POSIX.1") Base Specifications, Issue 8. The *ws_xpixel* and *ws_ypixel* members of *struct winsize* are FreeBSD extensions.