

**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 <b>tcgetwinsize()</b> or to <b>tcsetwinsize()</b> is not a valid file descriptor.                      |
| [ENOTTY] | The <i>fd</i> argument to <b>tcgetwinsize()</b> or to <b>tcsetwinsize()</b> is not associated with a character special device.   |
| [EINVAL] | The <i>w</i> argument to <b>tcsetwinsize()</b> is not valid.   |
| [EFAULT] | The <i>w</i> argument to <b>tcgetwinsize()</b> or to <b>tcsetwinsize()</b> 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.