

NAME

grantpt – grant access to the slave pseudoterminal

SYNOPSIS

```
#include <stdlib.h>
```

```
int grantpt(int fd);
```

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

grantpt():

Since glibc 2.24:

```
_XOPEN_SOURCE >= 500 ||
(_XOPEN_SOURCE && _XOPEN_SOURCE_EXTENDED)
```

Glibc 2.23 and earlier:

```
_XOPEN_SOURCE
```

DESCRIPTION

The **grantpt()** function changes the mode and owner of the slave pseudoterminal device corresponding to the master pseudoterminal referred to by *fd*. The user ID of the slave is set to the real UID of the calling process. The group ID is set to an unspecified value (e.g., *tty*). The mode of the slave is set to 0620 (crw--w----).

The behavior of **grantpt()** is unspecified if a signal handler is installed to catch **SIGCHLD** signals.

RETURN VALUE

When successful, **grantpt()** returns 0. Otherwise, it returns -1 and sets *errno* appropriately.

ERRORS**EACCES**

The corresponding slave pseudoterminal could not be accessed.

EBADF

The *fd* argument is not a valid open file descriptor.

EINVAL

The *fd* argument is valid but not associated with a master pseudoterminal.

VERSIONS

grantpt() is provided in glibc since version 2.1.

ATTRIBUTES

For an explanation of the terms used in this section, see **attributes(7)**.

Interface	Attribute	Value
grantpt()	Thread safety	MT-Safe locale

CONFORMING TO

POSIX.1-2001, POSIX.1-2008.

NOTES

This is part of the UNIX 98 pseudoterminal support, see **pts(4)**.

Many systems implement this function via a set-user-ID helper binary called "pt_chown". On Linux systems with a devpts filesystem (present since Linux 2.2), the kernel normally sets the correct ownership and permissions for the pseudoterminal slave when the master is opened (**posix_openpt(3)**), so that nothing must be done by **grantpt()**. Thus, no such helper binary is required (and indeed it is configured to be absent during the glibc build that is typical on many systems).

SEE ALSO

open(2), **posix_openpt(3)**, **ptsname(3)**, **unlockpt(3)**, **pts(4)**, **pty(7)**

COLOPHON

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