

NAME

`posix_openpt` – open a pseudoterminal device

SYNOPSIS

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

```
#include <fcntl.h>
```

```
int posix_openpt(int flags);
```

Feature Test Macro Requirements for glibc (see [feature_test_macros\(7\)](#)):

```
posix_openpt(): _XOPEN_SOURCE >= 600
```

DESCRIPTION

The `posix_openpt()` function opens an unused pseudoterminal master device, returning a file descriptor that can be used to refer to that device.

The `flags` argument is a bit mask that ORs together zero or more of the following flags:

O_RDWR

Open the device for both reading and writing. It is usual to specify this flag.

O_NOCTTY

Do not make this device the controlling terminal for the process.

RETURN VALUE

On success, `posix_openpt()` returns a nonnegative file descriptor which is the lowest numbered unused file descriptor. On failure, `-1` is returned, and `errno` is set to indicate the error.

ERRORS

See [open\(2\)](#).

VERSIONS

Glibc support for `posix_openpt()` has been provided since version 2.2.1.

ATTRIBUTES

For an explanation of the terms used in this section, see [attributes\(7\)](#).

Interface	Attribute	Value
<code>posix_openpt()</code>	Thread safety	MT-Safe

CONFORMING TO

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

`posix_openpt()` is part of the UNIX 98 pseudoterminal support (see [pts\(4\)](#)).

NOTES

Some older UNIX implementations that support System V (aka UNIX 98) pseudoterminals don't have this function, but it is easy to implement:

```
int
posix_openpt(int flags)
{
    return open("/dev/ptmx", flags);
}
```

Calling `posix_openpt()` creates a pathname for the corresponding pseudoterminal slave device. The pathname of the slave device can be obtained using [ptsname\(3\)](#). The slave device pathname exists only as long as the master device is open.

SEE ALSO

[open\(2\)](#), [getpt\(3\)](#), [grantpt\(3\)](#), [ptsname\(3\)](#), [unlockpt\(3\)](#), [pts\(4\)](#), [pty\(7\)](#)

COLOPHON

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<https://www.kernel.org/doc/man-pages/>.