NAME
ptmx, pts − pseudoterminal master and slave

DESCRIPTION
The file */dev/ptmx* (the pseudoterminal multiplexor device) is a character file with major number 5 and minor number 2, usually with mode 0666 and ownership root:root. It is used to create a pseudoterminal master and slave pair.

When a process opens */dev/ptmx*, it gets a file descriptor for a pseudoterminal master and a pseudoterminal slave device is created in the */dev/pts* directory. Each file descriptor obtained by opening */dev/ptmx* is an independent pseudoterminal master with its own associated slave, whose path can be found by passing the file descriptor to **ptsname**(3).

Before opening the pseudoterminal slave, you must pass the master's file descriptor to **grantpt**(3) and **unlockpt**(3).

Once both the pseudoterminal master and slave are open, the slave provides processes with an interface that is identical to that of a real terminal.

Data written to the slave is presented on the master file descriptor as input. Data written to the master is presented to the slave as input.

In practice, pseudoterminals are used for implementing terminal emulators such as **xterm**(1), in which data read from the pseudoterminal master is interpreted by the application in the same way a real terminal would interpret the data, and for implementing remote-login programs such as **sshd**(8), in which data read from the pseudoterminal master is sent across the network to a client program that is connected to a terminal or terminal emulator.

Pseudoterminals can also be used to send input to programs that normally refuse to read input from pipes (such as **su**(1), and **passwd**(1)).

FILES
/dev/ptmx, */dev/pts/**

NOTES
The Linux support for the above (known as UNIX 98 pseudoterminal naming) is done using the *devpts* filesystem, which should be mounted on */dev/pts*.

SEE ALSO
getpt(3), **grantpt**(3), **ptsname**(3), **unlockpt**(3), **pty**(7)