



Rocky Enterprise Linux 9.2 Manual Pages on command 'ptmx.4'

C:\>man ptmx.4

PTS(4) Linux Programmer's Manual PTS(4)

NAME

ptmx, pts - pseudoterminal master and slave

DESCRIPTION

The file `/dev/ptmx` 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 (PTM), and a pseudoterminal slave (PTS) device is created in the `/dev/pts` directory. Each file descriptor obtained by opening `/dev/ptmx` is an independent PTM with its own associated PTS, 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.

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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 pseu?

doterminal 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, that should be mounted on `/dev/pts`.

Before this UNIX 98 scheme, master pseudoterminals were called `/dev/ptyp0`, ... and slave pseudoterminals `/dev/ttyp0`, ... and one needed lots of preallocated device nodes.

SEE ALSO

`getpt(3)`, `grantpt(3)`, `ptsname(3)`, `unlockpt(3)`, `pty(7)`

COLOPHON

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