

NAME

pipe — named pipe

DESCRIPTION

The files identified under `/dev/pipe/*` are called named *pipes*, and are used for one way communications between processes. When a named *pipe* is written, using the file descriptor returned from the `open`, up to 4096 bytes of data are buffered before the writing process is suspended. A read using the descriptor returned from the `open` will remove data from the *pipe*. Reading an empty *pipe* will put the process to sleep until there is data available. Since a write to a *pipe* is guaranteed to be atomic, several processes may write a pipe simultaneously without their individual writes intermixing.

As long as at least one process has either the reading or the writing end of a pipe open, any data that is in the pipe is preserved. When the last reference to a pipe is gone (closed), any data that is in the pipe is discarded.

`ioctl(2)` can be used to cause the process not to sleep when an empty or full pipe is encountered. It is used as follows:

```
#include <sys/ioctl.h>
ioctl(fd, FIOPIPE, &addr); /* used to set the mode */
ioctl(fd, FIOGPIPE, &addr); /* used to get the mode */
```

Addr is a two byte structure: the first byte is the read flag and the second byte is the write flag. The flag set to 0 means do not sleep on a write to a full pipe or a read of an empty pipe. This causes a 0 to be returned from the respective system call. A 1 in the flag indicates the process will sleep on the above conditions.

FILES

`/dev/pipe/*`

SEE ALSO

`ioctl(2)`