



Red Hat Enterprise Linux Release 9.2 Manual Pages on 'tee.2' command

\$ man tee.2

TEE(2) Linux Programmer's Manual TEE(2)

NAME

tee - duplicating pipe content

SYNOPSIS

```
#define _GNU_SOURCE      /* See feature_test_macros(7) */

#include <fcntl.h>

ssize_t tee(int fd_in, int fd_out, size_t len, unsigned int flags);
```

DESCRIPTION

tee() duplicates up to len bytes of data from the pipe referred to by the file descriptor fd_in to the pipe referred to by the file descriptor fd_out. It does not consume the data that is duplicated from fd_in; therefore, that data can be copied by a subsequent splice(2). flags is a bit mask that is composed by ORing together zero or more of the following values:

SPLICE_F_MOVE Currently has no effect for tee(); see splice(2).

SPLICE_F_NONBLOCK Do not block on I/O; see splice(2) for further details.

SPLICE_F_MORE Currently has no effect for tee(), but may be implemented in the future; see splice(2).

SPLICE_F_GIFT Unused for tee(); see vmsplice(2).

RETURN VALUE

Upon successful completion, tee() returns the number of bytes that were duplicated between the input and output. A return value of 0 means

that there was no data to transfer, and it would not make sense to block, because there are no writers connected to the write end of the pipe referred to by `fd_in`.

On error, `tee()` returns -1 and `errno` is set to indicate the error.

ERRORS

`EAGAIN` `SPLICE_F_NONBLOCK` was specified in flags or one of the file descriptors had been marked as nonblocking (`O_NONBLOCK`), and the operation would block.

`EINVAL` `fd_in` or `fd_out` does not refer to a pipe; or `fd_in` and `fd_out` refer to the same pipe.

`ENOMEM` Out of memory.

VERSIONS

The `tee()` system call first appeared in Linux 2.6.17; library support was added to glibc in version 2.5.

CONFORMING TO

This system call is Linux-specific.

NOTES

Conceptually, `tee()` copies the data between the two pipes. In reality no real data copying takes place though: under the covers, `tee()` as? signs data to the output by merely grabbing a reference to the input.

EXAMPLES

The example below implements a basic `tee(1)` program using the `tee()` system call. Here is an example of its use:

```
$ date |./a.out out.log | cat
```

```
Tue Oct 28 10:06:00 CET 2014
```

```
$ cat out.log
```

```
Tue Oct 28 10:06:00 CET 2014
```

Program source

```
#define _GNU_SOURCE
#include <fcntl.h>
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
```

```

#include <errno.h>

#include <limits.h>

int

main(int argc, char *argv[])
{
    int fd;

    int len, slen;

    if (argc != 2) {
        fprintf(stderr, "Usage: %s <file>\n", argv[0]);
        exit(EXIT_FAILURE);
    }

    fd = open(argv[1], O_WRONLY | O_CREAT | O_TRUNC, 0644);
    if (fd == -1) {
        perror("open");
        exit(EXIT_FAILURE);
    }

    do {
        /*
         * tee stdin to stdout.
         */

        len = tee(STDIN_FILENO, STDOUT_FILENO,
                  INT_MAX, SPLICE_F_NONBLOCK);

        if (len < 0) {
            if (errno == EAGAIN)
                continue;

            perror("tee");
            exit(EXIT_FAILURE);
        } else
            if (len == 0)
                break;
        /*
         * Consume stdin by splicing it to a file.
         */
    } while (len > 0);
}

```

```

while (len > 0) {
    slen = splice(STDIN_FILENO, NULL, fd, NULL,
                  len, SPLICE_F_MOVE);
    if (slen < 0) {
        perror("splice");
        break;
    }
    len -= slen;
}
} while (1);
close(fd);
exit(EXIT_SUCCESS);
}

```

SEE ALSO

splice(2), vmsplice(2), pipe(7)

COLOPHON

This page is part of release 5.10 of the Linux man-pages project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at <https://www.kernel.org/doc/man-pages/>.

Linux

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