NAME

open_memstream, open_wmemstream - open a dynamic memory buffer stream

SYNOPSIS

#include <stdio.h>

FILE *open_memstream(char ***ptr***, size_t ****sizeloc***);**

#include <wchar.h>

FILE *open_wmemstream(wchar_t ***ptr***, size_t ****sizeloc***);**

Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

open_memstream(), **open_wmemstream**():
    Since glibc 2.10:
        _POSIX_C_SOURCE >= 200809L
    Before glibc 2.10:
        _GNU_SOURCE

DESCRIPTION

The **open_memstream**() function opens a stream for writing to a memory buffer. The function dynamically allocates the buffer, and the buffer automatically grows as needed. Initially, the buffer has a size of zero. After closing the stream, the caller should free(3) this buffer.

The locations pointed to by *ptr* and *sizeloc* are used to report, respectively, the current location and the size of the buffer. The locations referred to by these pointers are updated each time the stream is flushed (fflush(3)) and when the stream is closed (fclose(3)). These values remain valid only as long as the caller performs no further output on the stream. If further output is performed, then the stream must again be flushed before trying to access these values.

A null byte is maintained at the end of the buffer. This byte is *not* included in the size value stored at *sizeloc*.

The stream maintains the notion of a current position, which is initially zero (the start of the buffer). Each write operation implicitly adjusts the buffer position. The stream's buffer position can be explicitly changed with fseek(3) or fseeko(3). Moving the buffer position past the end of the data already written fills the intervening space with null characters.

The **open_wmemstream**() is similar to **open_memstream**(), but operates on wide characters instead of bytes.

RETURN VALUE

Upon successful completion, **open_memstream**() and **open_wmemstream**() return a *FILE* pointer. Otherwise, NULL is returned and *errno* is set to indicate the error.

VERSIONS

open_memstream() was already available in glibc 1.0.x. **open_wmemstream**() is available since glibc 2.4.

ATTRIBUTES

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

Interface	Attribute	Value
open_memstream(), **open_wmemstream**	Thread safety	MT-Safe

CONFORMING TO

POSIX.1-2008. These functions are not specified in POSIX.1-2001, and are not widely available on other systems.

NOTES

There is no file descriptor associated with the file stream returned by these functions (i.e., fileno(3) will return an error if called on the returned stream).

BUGS

In glibc before version 2.7, seeking past the end of a stream created by **open_memstream**() does not enlarge the buffer; instead the fseek(3) call fails, returning -1.

EXAMPLE

See fmemopen(3).

SEE ALSO

fmemopen(3), fopen(3), setbuf(3)

COLOPHON

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