



Red Hat Enterprise Linux Release 9.2 Manual Pages on 'mbsinit.3' command

\$ man mbsinit.3

MBSINIT(3) Linux Programmer's Manual MBSINIT(3)

NAME

mbsinit - test for initial shift state

SYNOPSIS

```
#include <wchar.h>
```

```
int mbsinit(const mbstate_t *ps);
```

DESCRIPTION

Character conversion between the multibyte representation and the wide character representation uses conversion state, of type `mbstate_t`. Conversion of a string uses a finite-state machine; when it is interrupted after the complete conversion of a number of characters, it may need to save a state for processing the remaining characters. Such a conversion state is needed for the sake of encodings such as ISO-2022 and UTF-7.

The initial state is the state at the beginning of conversion of a string. There are two kinds of state: the one used by multibyte to wide character conversion functions, such as `mbsrtowcs(3)`, and the one used by wide character to multibyte conversion functions, such as `wcsrtoombs(3)`, but they both fit in a `mbstate_t`, and they both have the same representation for an initial state.

For 8-bit encodings, all states are equivalent to the initial state.

For multibyte encodings like UTF-8, EUC-*, BIG5 or SJIS, the wide character to multibyte conversion functions never produce non-initial

states, but the multibyte to wide-character conversion functions like `mbrtowc(3)` do produce non-initial states when interrupted in the middle of a character.

One possible way to create an `mbstate_t` in initial state is to set it to zero:

```
mbstate_t state;

memset(&state, 0, sizeof(state));
```

On Linux, the following works as well, but might generate compiler warnings:

```
mbstate_t state = { 0 };
```

The function `mbsinit()` tests whether `*ps` corresponds to an initial state.

RETURN VALUE

`mbsinit()` returns nonzero if `*ps` is an initial state, or if `ps` is `NULL`.

Otherwise, it returns 0.

ATTRIBUTES

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

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?Interface ? Attribute ? Value ?

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?`mbsinit()` ? Thread safety ? MT-Safe ?

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CONFORMING TO

POSIX.1-2001, POSIX.1-2008, C99.

NOTES

The behavior of `mbsinit()` depends on the `LC_CTYPE` category of the current locale.

SEE ALSO

[mbrlen\(3\)](#), [mbrtowc\(3\)](#), [mbsrtowcs\(3\)](#), [wcrctomb\(3\)](#), [wcsrtombs\(3\)](#)

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/>.

GNU

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