



Rocky Enterprise Linux 9.2 Manual Pages on command 'malloc_get_state.3'

C:\>man malloc_get_state.3

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

NAME

malloc_get_state, malloc_set_state - record and restore state of malloc implementation

SYNOPSIS

```
#include <malloc.h>

void* malloc_get_state(void);

int malloc_set_state(void *state);
```

DESCRIPTION

Note: these function are removed in glibc version 2.25.

The `malloc_get_state()` function records the current state of all `malloc(3)` internal bookkeeping variables (but not the actual contents of the heap or the state of `malloc_hook(3)` functions pointers). The state is recorded in a system-dependent opaque data structure dynamically allocated via `malloc(3)`, and a pointer to that data structure is returned as the function result. (It is the caller's responsibility to `free(3)` this memory.)

The `malloc_set_state()` function restores the state of all `malloc(3)` internal bookkeeping variables to the values recorded in the opaque data structure pointed to by `state`.

RETURN VALUE

On success, `malloc_get_state()` returns a pointer to a newly allocated opaque data structure. On error (for example, memory could not be allocated for the data

structure), malloc_get_state() returns NULL.

On success, malloc_set_state() returns 0. If the implementation detects that state does not point to a correctly formed data structure, malloc_set_state() returns -1.

If the implementation detects that the version of the data structure referred to by state is a more recent version than this implementation knows about, malloc_set_state() returns -2.

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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?malloc_get_state(), ? Thread safety ? MT-Safe ?

?malloc_set_state() ? ? ?

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CONFORMING TO

These functions are GNU extensions.

NOTES

These functions are useful when using this malloc(3) implementation as part of a shared library, and the heap contents are saved/restored via some other method.

This technique is used by GNU Emacs to implement its "dumping" function.

Hook function pointers are never saved or restored by these functions, with two exceptions: if malloc checking (see mallopt(3)) was in use when malloc_get_state() was called, then malloc_set_state() resets malloc checking hooks if possible; if malloc checking was not in use in the recorded state, but the caller has requested malloc checking, then the hooks are reset to 0.

SEE ALSO

malloc(3), mallopt(3)

COLOPHON

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