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

\$ man malloc.3p

MALLOC(3P) POSIX Programmer's Manual MALLOC(3P)

PROLOG

This manual page is part of the POSIX Programmer's Manual. The Linux implementation of this interface may differ (consult the corresponding Linux manual page for details of Linux behavior), or the interface may not be implemented on Linux.

NAME

malloc ? a memory allocator

SYNOPSIS

```
#include <stdlib.h>

void *malloc(size_t size);
```

DESCRIPTION

The functionality described on this reference page is aligned with the ISO C standard. Any conflict between the requirements described here and the ISO C standard is unintentional. This volume of POSIX.1?2017 defers to the ISO C standard.

The malloc() function shall allocate unused space for an object whose size in bytes is specified by size and whose value is unspecified.

The order and contiguity of storage allocated by successive calls to malloc() is unspecified. The pointer returned if the allocation succeeds shall be suitably aligned so that it may be assigned to a pointer to any type of object and then used to access such an object in the space allocated (until the space is explicitly freed or reallocated).

Each such allocation shall yield a pointer to an object disjoint from any other object. The pointer returned points to the start (lowest byte address) of the allocated space. If the space cannot be allocated, a null pointer shall be returned. If the size of the space requested is 0, the behavior is implementation-defined: either a null pointer shall be returned, or the behavior shall be as if the size were some non-zero value, except that the behavior is undefined if the returned pointer is used to access an object.

RETURN VALUE

Upon successful completion with size not equal to 0, `malloc()` shall return a pointer to the allocated space. If size is 0, either:

- * A null pointer shall be returned and `errno` may be set to an implementation-defined value, or
- * A pointer to the allocated space shall be returned. The application shall ensure that the pointer is not used to access an object.

Otherwise, it shall return a null pointer and set `errno` to indicate the error.

ERRORS

The `malloc()` function shall fail if:

`ENOMEM` Insufficient storage space is available.

The following sections are informative.

EXAMPLES

None.

APPLICATION USAGE

None.

RATIONALE

None.

FUTURE DIRECTIONS

None.

SEE ALSO

`calloc()`, `free()`, `getrlimit()`, `posix_memalign()`, `realloc()`

The Base Definitions volume of POSIX.1?2017, <stdlib.h>

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