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## **Red Hat Enterprise Linux Release 9.2 Manual Pages on 'umask.3p' command**

**\$ man umask.3p**

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

umask ? set and get the file mode creation mask

### SYNOPSIS

```
#include <sys/stat.h>

mode_t umask(mode_t cmask);
```

### DESCRIPTION

The `umask()` function shall set the file mode creation mask of the process to `cmask` and return the previous value of the mask. Only the file permission bits of `cmask` (see `<sys/stat.h>`) are used; the meaning of the other bits is implementation-defined.

The file mode creation mask of the process is used to turn off permission bits in the mode argument supplied during calls to the following functions:

- \* `open()`, `openat()`, `creat()`, `mkdir()`, `mkdirat()`, `mkfifo()`, and `mkfifoat()`
- \* `mknod()`, `mknodat()`
- \* `mq_open()`

\* `sem_open()`

Bit positions that are set in `cmask` are cleared in the mode of the created file.

## RETURN VALUE

The file permission bits in the value returned by `umask()` shall be the previous value of the file mode creation mask. The state of any other bits in that value is unspecified, except that a subsequent call to `umask()` with the returned value as `cmask` shall leave the state of the mask the same as its state before the first call, including any unspecified use of those bits.

## ERRORS

No errors are defined.

The following sections are informative.

## EXAMPLES

None.

## APPLICATION USAGE

None.

## RATIONALE

Unsigned argument and return types for `umask()` were proposed. The return type and the argument were both changed to `mode_t`.

Historical implementations have made use of additional bits in `cmask` for their implementation-defined purposes. The addition of the text that the meaning of other bits of the field is implementation-defined permits these implementations to conform to this volume of POSIX.1?2017.

## FUTURE DIRECTIONS

None.

## SEE ALSO

`creat()`, `exec`, `mkdir()`, `mkfifo()`, `mknod()`, `mq_open()`, `open()`,  
`sem_open()`

The Base Definitions volume of POSIX.1?2017, `<sys_stat.h>`,  
`<sys_types.h>`

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