



Rocky Enterprise Linux 9.2 Manual Pages on command 'kmem.4'

\$ man kmem.4

MEM(4) Linux Programmer's Manual MEM(4)

NAME

mem, kmem, port - system memory, kernel memory and system ports

DESCRIPTION

/dev/mem is a character device file that is an image of the main memory of the computer. It may be used, for example, to examine (and even patch) the system.

Byte addresses in /dev/mem are interpreted as physical memory addresses. References to nonexistent locations cause errors to be returned.

Examining and patching is likely to lead to unexpected results when read-only or write-only bits are present.

Since Linux 2.6.26, and depending on the architecture, the CONFIG_STRICT_DEVMEM kernel configuration option limits the areas which can be accessed through this file. For example: on x86, RAM access is not allowed but accessing memory-mapped PCI regions is.

It is typically created by:

```
mknod -m 660 /dev/mem c 1 1
```

```
chown root:kmem /dev/mem
```

The file `/dev/kmem` is the same as `/dev/mem`, except that the kernel virtual memory rather than physical memory is accessed. Since Linux 2.6.26, this file is available only if the `CONFIG_DEVMEM` kernel configuration option is enabled.

It is typically created by:

```
mknod -m 640 /dev/kmem c 1 2
```

```
chown root:kmem /dev/kmem
```

`/dev/port` is similar to `/dev/mem`, but the I/O ports are accessed.

It is typically created by:

```
mknod -m 660 /dev/port c 1 4
```

```
chown root:kmem /dev/port
```

FILES

`/dev/mem`

`/dev/kmem`

`/dev/port`

SEE ALSO

`chown(1)`, `mknod(1)`, `ioperm(2)`

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/>.