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_DEVKMEM** 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)