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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'cpuid.4' command

$ man cpuid.4

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

NAME

cpuid - x86 CPUID access device

DESCRIPTION

CPUID provides an interface for querying information about the x86 CPU.

This device is accessed by lseek(2) or pread(2) to the appropriate CPUID level and reading in chunks of 16 bytes. A larger read size means multiple reads of consecutive levels.

The lower 32 bits of the file position is used as the incoming %eax, and the upper 32 bits of the file position as the incoming %ecx, the latter is intended for "counting" eax levels like eax=4.

This driver uses /dev/cpu/CPUNUM/cpuid, where CPUNUM is the minor number, and on an SMP box will direct the access to CPU CPUNUM as listed in /proc/cpuinfo.

This file is protected so that it can be read only by the user root, or members of the group root.

NOTES

The CPUID instruction can be directly executed by a program using in? line assembler. However this device allows convenient access to all CPUs without changing process affinity.

Most of the information in cpuid is reported by the kernel in cooked form either in /proc/cpuinfo or through subdirectories in /sys/de? vices/system/cpu. Direct CPUID access through this device should only

be used in exceptional cases.

The cpuid driver is not auto-loaded. On modular kernels you might need to use the following command to load it explicitly before use:

```
$ modprobe cpuid
```

There is no support for CPUID functions that require additional input registers.

Very old x86 CPUs don't support CPUID.

SEE ALSO

cpuid(1)

Intel Corporation, Intel 64 and IA-32 Architectures Software Devel? oper's Manual Volume 2A: Instruction Set Reference, A-M, 3-180 CPUID reference.

Intel Corporation, Intel Processor Identification and the CPUID In? struction, Application note 485.

COLOPHON

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