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Linux Find If Processor / CPU is 64 bit / 32 bit (long mode ~ lm)

Posted by [Vivek Gite](#) <vivek@nixcraft.com>

How do I determine if my CPU is 64bit or not under Linux operating systems?

You need to use the `uname` command, which prints system information including kernel version and whether kernel is 32 bit or 64 bit. You need to run the `less /proc/cpuinfo` command to determine if CPU is 64 bit or not.



[1]

Example - Find Out If Running Kernel Is 32 Or 64 Bit

Type the following command at the terminal, run:

```
$ uname -a
```

Output:

```
Linux ora100 2.6.5-7.252-smp #1 SMP Tue Feb 14 11:11:04 UTC 2006 x86_64 x86_64 x86_64 GNU/Linux
```

x86_64 GNU/Linux indicates that you've a 64bit Linux kernel running. If you use see i386/i486/i586/i686 it is a 32 bit kernel.

How Do I Find Out CPU is 32bit or 64bit?

Simply type the following command and if you see `lm` in output, you have a 64 bit CPU based system:

```
$ grep flags /proc/cpuinfo
```

Output:

```
flags      : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dcache icache snoop1 snoop2
flags      : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dcache icache snoop1 snoop2
flags      : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dcache icache snoop1 snoop2
flags      : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dcache icache snoop1 snoop2
```

CPU Modes:

- `lm` means Long mode - 64 bit CPU
- Real mode 16 bit CPU
- Protected Mode is 32-bit CPU

See also:

- [How do I find out if my server CPU can run a 64 bit kernel version \(apps\) or not?](#) [2]

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[1] Image: <http://www.cyberciti.biz/faq/category/linux/>

[2] How do I find out if my server CPU can run a 64 bit kernel version (apps) or not?: <http://www.cyberciti.biz/tips/how-do-i-find-out-if-my-server-cpu-can-run-a-64-bit-kernel-version-apps-or-not.html>

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