

转: <http://www.cnblogs.com/alwu007/p/6024631.html>

CPU

1. lscpu: 显示cpu架构信息

```
[xxx@localhost ~]$ lscpu
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:            Little Endian
CPU(s):                4                                     #总处理器核心数量
On-line CPU(s) list:   0-3
Thread(s) per core:    1                                     #每个核心支持的线程数量。1表示只支持
                        一个线程, 即不支持超线程
Core(s) per socket:    1                                     #每个处理器的核心数量
Socket(s):              4                                     #处理器数量
NUMA node(s):          1
Vendor ID:              GenuineIntel
CPU family:             6
Model:                  63
Stepping:               0
CPU MHz:                2599.998
BogoMIPS:               5199.99
Hypervisor vendor:     VMware                               #管理程序供应商
Virtualization type:    full
L1d cache:              32K
L1i cache:              32K
L2 cache:               256K
L3 cache:               30720K
NUMA node0 CPU(s):     0-3
```

总处理器核心数量=处理器数量*每个处理器的核心数量*每个核心支持的线程数量。

即: $CPU(s) = Socket(s) * Core(s) * Thread(s)$ 。

我们看一下MAN中是如何描述的:

```
[xxx@localhost ~]$ man lscpu
COLUMNS
    CPU    The logical CPU number of a CPU as used by the Linux kernel.
#逻辑CPU数量
    CORE   The logical core number. A core can contain several
CPUs.     #逻辑核心数量
    SOCKET The logical socket number. A socket can contain several
cores.    #逻辑插槽(路)数量
```

2. cat /proc/cpuinfo: 查看CPU详细信息

```
[xxx@localhost ~]$ cat /proc/cpuinfo
```

```
processor      : 0
vendor_id     : GenuineIntel
cpu family    : 6
model         : 63
model name    : Intel(R) Xeon(R) CPU E5-2690 v3 @ 2.60GHz
stepping      : 0
cpu MHz       : 2599.998
cache size    : 30720 KB
fpu           : yes
fpu_exception : yes
cpuid level   : 13
wp            : yes
flags         : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge
mca cmov pat pse36 clflush dts mmx fxsr sse sse2 ss syscall nx rdtscp lm
constant_tsc arch_perfmon pebs bts xtopology tsc_reliable nonstop_tsc
aperfmpperf unfair_spinlock pni pclmulqdq ssse3 fma cx16 sse4_1 sse4_2
movbe popcnt aes xsave avx hypervisor lahf_lm ida arat epb pln pts dts
bogomips      : 5199.99
clflush size  : 64
cache_alignment : 64
address sizes  : 40 bits physical, 48 bits virtual
power management:
```

```
processor      : 1
vendor_id     : GenuineIntel
cpu family    : 6
model         : 63
model name    : Intel(R) Xeon(R) CPU E5-2690 v3 @ 2.60GHz
stepping      : 0
cpu MHz       : 2599.998
cache size    : 30720 KB
fpu           : yes
fpu_exception : yes
cpuid level   : 13
wp            : yes
flags         : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge
mca cmov pat pse36 clflush dts mmx fxsr sse sse2 ss syscall nx rdtscp lm
constant_tsc arch_perfmon pebs bts xtopology tsc_reliable nonstop_tsc
aperfmpperf unfair_spinlock pni pclmulqdq ssse3 fma cx16 sse4_1 sse4_2
movbe popcnt aes xsave avx hypervisor lahf_lm ida arat epb pln pts dts
bogomips      : 5199.99
clflush size  : 64
cache_alignment : 64
address sizes  : 40 bits physical, 48 bits virtual
```

power management:

processor : 2
vendor_id : GenuineIntel
cpu family : 6
model : 63
model name : Intel(R) Xeon(R) CPU E5-2690 v3 @ 2.60GHz
stepping : 0
cpu MHz : 2599.998
cache size : 30720 KB
fpu : yes
fpu_exception : yes
cpuid level : 13
wp : yes
flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge
mca cmov pat pse36 clflush dts mmx fxsr sse sse2 ss syscall nx rdtscp lm
constant_tsc arch_perfmon pebs bts xtopology tsc_reliable nonstop_tsc
aperfmpperf unfair_spinlock pni pclmulqdq ssse3 fma cx16 sse4_1 sse4_2
movbe popcnt aes xsave avx hypervisor lahf_lm ida arat epb pln pts dts
bogomips : 5199.99
clflush size : 64
cache_alignment : 64
address sizes : 40 bits physical, 48 bits virtual
power management:

processor : 3
vendor_id : GenuineIntel
cpu family : 6
model : 63
model name : Intel(R) Xeon(R) CPU E5-2690 v3 @ 2.60GHz
stepping : 0
cpu MHz : 2599.998
cache size : 30720 KB
fpu : yes
fpu_exception : yes
cpuid level : 13
wp : yes
flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge
mca cmov pat pse36 clflush dts mmx fxsr sse sse2 ss syscall nx rdtscp lm
constant_tsc arch_perfmon pebs bts xtopology tsc_reliable nonstop_tsc
aperfmpperf unfair_spinlock pni pclmulqdq ssse3 fma cx16 sse4_1 sse4_2
movbe popcnt aes xsave avx hypervisor lahf_lm ida arat epb pln pts dts
bogomips : 5199.99
clflush size : 64
cache_alignment : 64

```
address sizes   : 40 bits physical, 48 bits virtual
power management:
```

这样输出的话，内容有些多，看起来会有些混乱。我们可以用几条命令来查看我们想要知道的信息：

查看物理CPU个数

```
cat /proc/cpuinfo | grep "physical id" | sort | uniq
```

查看每个物理CPU中core的个数(即核数)

```
cat /proc/cpuinfo | grep "cpu cores" | uniq
```

查看每个物理CPU中线程的个数

```
cat /proc/cpuinfo | grep "siblings" | uniq
```

查看逻辑CPU的个数

```
cat /proc/cpuinfo | grep "processor"
```

查看CPU型号

```
cat /proc/cpuinfo | grep "model name" | uniq
```

内存

查看/proc/meminfo或者使用free命令。free命令就是从meminfo中获取的信息。

一般情况下，使用free就能得到我们想要的信息：

```
[xxx@localhost ~]$ free -m
```

	total	used	free	shared	buffers
cached					
Mem:	7868	954	6914	0	64
619					
-/+ buffers/cache:		271	7597		
Swap:	4031	0	4031		

可以看出，内存大小是8G。

硬盘

1. lsblk: blk是block的缩写。列出块设备

```
[xxx@localhost ~]$ lsblk
```

NAME	MAJ:MIN	RM	SIZE	RO	TYPE	MOUNTPOINT
sr0	11:0	1	1024M	0	rom	
sdb	8:16	0	100G	0	disk	
└─sdb1	8:17	0	100G	0	part	/data
sda	8:0	0	60G	0	disk	
└─sda1	8:1	0	500M	0	part	/boot
└─sda2	8:2	0	59.5G	0	part	

```
└─VolGroup-lv_root (dm-0) 253:0 0 50G 0 lvm /
└─VolGroup-lv_swap (dm-1) 253:1 0 4G 0 lvm [SWAP]
└─VolGroup-lv_home (dm-2) 253:2 0 5.6G 0 lvm /home
```

其中，TYPE=disk表示硬盘。可以看出，硬盘分为sda和sdb，一共160G。

2. df: 查看硬盘使用情况

```
[xxx@localhost ~]$ df -h
```

Filesystem	Size	Used	Avail	Use%	Mounted on
/dev/mapper/VolGroup-lv_root	50G	1.7G	46G	4%	/
tmpfs	3.9G	0	3.9G	0%	/dev/shm
/dev/sda1	485M	39M	421M	9%	/boot
/dev/mapper/VolGroup-lv_home	5.5G	165M	5.1G	4%	/home
/dev/sdb1	99G	188M	94G	1%	/data

所有行的Size全加起来，也能大概算出硬盘大小。