

mcgonagall processors and memory

Interpreting NUMA: <https://blogs.igalia.com/dpino/2015/10/15/multicore-architectures-and-cpu-affinity/>

<https://medium.com/@chauhan.shobhit/lscpu-cpu-information-in-a-nutshell-fd1c0f5d71f3>

```
[:-) ~] uname -a
```

```
Linux kupapcsit01 3.10.0-1160.59.1.el7.x86_64 #1 SMP Wed Feb 23  
16:47:03 UTC 2022 x86_64 x86_64 x86_64 GNU/Linux
```

```
[:-) ~] grep MemTotal /proc/meminfo
```

```
MemTotal: 65691148 kB
```

```
[:-) ~] lscpu
```

```
Architecture: x86_64
```

```
CPU op-mode(s): 32-bit, 64-bit
```

```
Byte Order: Little Endian
```

```
CPU(s): 32
```

```
On-line CPU(s) list: 0-31
```

```
Thread(s) per core: 2
```

```
Core(s) per socket: 8
```

```
Socket(s): 2
```

```
NUMA node(s): 2
```

```
Vendor ID: GenuineIntel
```

```
CPU family: 6
```

```
Model: 63
```

```
Model name: Intel(R) Xeon(R) CPU E5-2640 v3 @ 2.60GHz
```

```
Stepping: 2
```

```
CPU MHz: 1199.865
```

```
CPU max MHz: 3400.0000
```

```
CPU min MHz: 1200.0000
```

```
BogoMIPS: 5187.17
```

```
Virtualization: VT-x
```

```
L1d cache: 32K
```

```
L1i cache: 32K
```

```
L2 cache: 256K
```

```
L3 cache: 20480K
```

```
NUMA node0 CPU(s): 0-7,16-23
```

```
NUMA node1 CPU(s): 8-15,24-31
```

```
[:-) ~/DataMine] lscpu -e
```

CPU	NODE	SOCKET	CORE	L1d:L1i:L2:L3	ONLINE	MAXMHZ	MINMHZ
0	0	0	0	0:0:0:0	yes	3400.0000	1200.0000
1	0	0	1	1:1:1:0	yes	3400.0000	1200.0000
2	0	0	2	2:2:2:0	yes	3400.0000	1200.0000
3	0	0	3	3:3:3:0	yes	3400.0000	1200.0000
4	0	0	4	4:4:4:0	yes	3400.0000	1200.0000
5	0	0	5	5:5:5:0	yes	3400.0000	1200.0000
6	0	0	6	6:6:6:0	yes	3400.0000	1200.0000
7	0	0	7	7:7:7:0	yes	3400.0000	1200.0000
8	1	1	8	8:8:8:1	yes	3400.0000	1200.0000
9	1	1	9	9:9:9:1	yes	3400.0000	1200.0000
10	1	1	10	10:10:10:1	yes	3400.0000	1200.0000
11	1	1	11	11:11:11:1	yes	3400.0000	1200.0000
12	1	1	12	12:12:12:1	yes	3400.0000	1200.0000
13	1	1	13	13:13:13:1	yes	3400.0000	1200.0000
14	1	1	14	14:14:14:1	yes	3400.0000	1200.0000
15	1	1	15	15:15:15:1	yes	3400.0000	1200.0000
16	0	0	0	0:0:0:0	yes	3400.0000	1200.0000
17	0	0	1	1:1:1:0	yes	3400.0000	1200.0000
18	0	0	2	2:2:2:0	yes	3400.0000	1200.0000
19	0	0	3	3:3:3:0	yes	3400.0000	1200.0000
20	0	0	4	4:4:4:0	yes	3400.0000	1200.0000
21	0	0	5	5:5:5:0	yes	3400.0000	1200.0000
22	0	0	6	6:6:6:0	yes	3400.0000	1200.0000
23	0	0	7	7:7:7:0	yes	3400.0000	1200.0000
24	1	1	8	8:8:8:1	yes	3400.0000	1200.0000
25	1	1	9	9:9:9:1	yes	3400.0000	1200.0000
26	1	1	10	10:10:10:1	yes	3400.0000	1200.0000
27	1	1	11	11:11:11:1	yes	3400.0000	1200.0000
28	1	1	12	12:12:12:1	yes	3400.0000	1200.0000
29	1	1	13	13:13:13:1	yes	3400.0000	1200.0000
30	1	1	14	14:14:14:1	yes	3400.0000	1200.0000
31	1	1	15	15:15:15:1	yes	3400.0000	1200.0000