

SÃO PAULO TECH SHCOOL



Sistemas Operacionais

Pesquisa e Comandos Linux na Instância EC2

Guilherme Coimbra – 02221070

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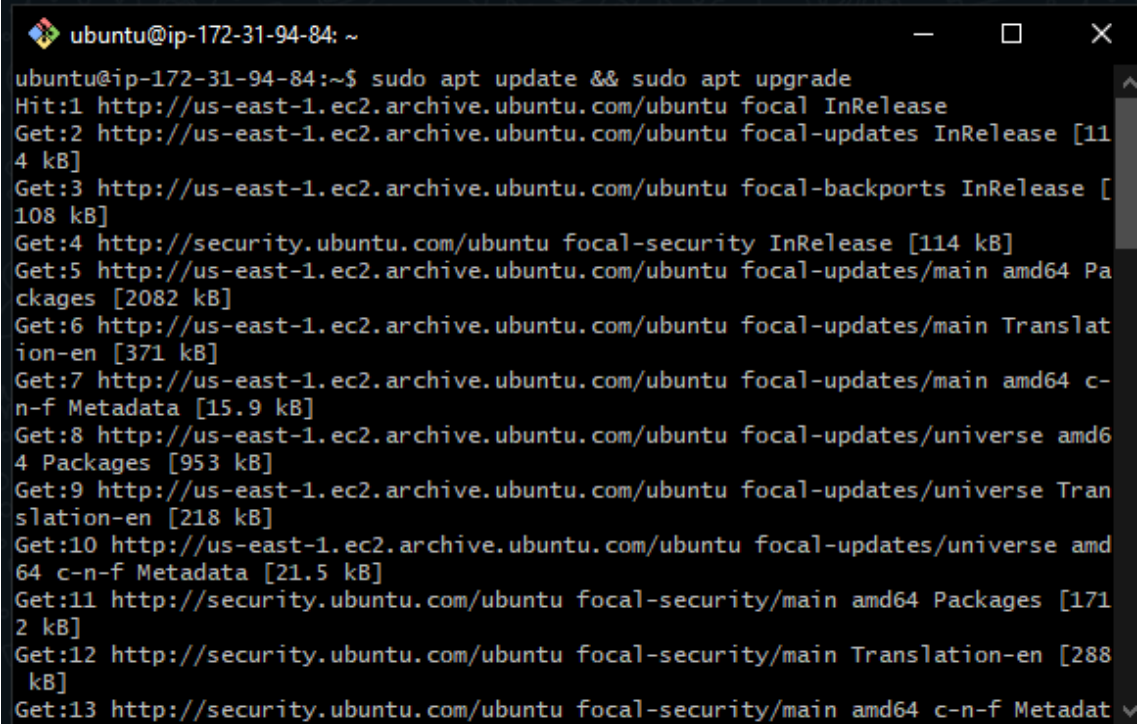
1. Execute os comandos Linux na instância EC2 e descreva para que serve listando as informações importantes sobre eles, adicionando (print):

- sudo apt **update**:

é usado para **baixar** as atualizações e informações dos pacotes/programas instalados no sistema operacional.

- sudo apt **upgrade**:

é usado para **instalar** as atualizações disponíveis dos pacotes/programas instalados atualmente no sistema operacional.



```
ubuntu@ip-172-31-94-84: ~  
ubuntu@ip-172-31-94-84:~$ sudo apt update && sudo apt upgrade  
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal InRelease  
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]  
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]  
Get:4 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]  
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [2082 kB]  
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main Translation-en [371 kB]  
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 c-n-f Metadata [15.9 kB]  
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [953 kB]  
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/universe Translation-en [218 kB]  
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/universe amd64 c-n-f Metadata [21.5 kB]  
Get:11 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [1712 kB]  
Get:12 http://security.ubuntu.com/ubuntu focal-security/main Translation-en [288 kB]  
Get:13 http://security.ubuntu.com/ubuntu focal-security/main amd64 c-n-f Metadata [15.9 kB]
```

- man:

Manual muito completo, pesquisa informação acerca de todos os comandos que necessitemos de saber, como por exemplo man find;

```
ubuntu@ip-172-31-94-84: ~  
FIND(1)                                General Commands Manual                                FIND(1)  
  
NAME  
    find - search for files in a directory hierarchy  
  
SYNOPSIS  
    find [-H] [-L] [-P] [-D debugopts] [-O level] [starting-point...] [ex-  
    pression]  
  
DESCRIPTION  
    This manual page documents the GNU version of find. GNU find searches  
    the directory tree rooted at each given starting-point by evaluating  
    the given expression from left to right, according to the rules of  
    precedence (see section OPERATORS), until the outcome is known (the  
    left hand side is false for and operations, true for or), at which  
    point find moves on to the next file name. If no starting-point is  
    specified, '.' is assumed.  
  
    If you are using find in an environment where security is important  
    (for example if you are using it to search directories that are  
    writable by other users), you should read the 'Security Considerations'  
    chapter of the findutils documentation, which is called Finding Files  
    and comes with findutils. That document also includes a lot more de-  
    tail and discussion than this manual page, so you may find it a more  
    useful source of information.  
  
OPTIONS  
Manual page find(1) line 1 (press h for help or q to quit)
```

- lsb release -a:

O comando **lsb_release** exibe informações de LSB (Linux Standard Base) sobre sua distribuição específica do Linux , incluindo número da versão, nome do código da versão e ID do distribuidor.

```
ubuntu@ip-172-31-94-84:~$ lsb_release -a  
No LSB modules are available.  
Distributor ID: Ubuntu  
Description:    Ubuntu 20.04.5 LTS  
Release:        20.04  
Codename:       focal  
ubuntu@ip-172-31-94-84:~$
```

- cat/proc/cpuinfo:

Cat serve para concatenar e também exibir o conteúdo dos arquivos.
nesse caso ele ta exibindo o arquivo cpuinfo que está dentro da pasta proc.

```

ubuntu@ip-172-31-94-84:~$ cat /proc/cpuinfo
processor       : 0
vendor_id      : GenuineIntel
cpu family     : 6
model          : 63
model name     : Intel(R) Xeon(R) CPU E5-2676 v3 @ 2.40GHz
stepping       : 2
microcode      : 0x49
cpu MHz        : 2400.037
cache size     : 30720 KB
physical id    : 0
siblings       : 1
core id        : 0
cpu cores      : 1
apicid         : 0
initial apicid : 0
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 pse
36 clflush mmx fxsr sse sse2 ht syscall nx rdtscp lm constant_tsc rep_good nopl xtopolo
gy cpuid tsc_known_freq pni pclmulqdq ssse3 fma cx16 pcid sse4_1 sse4_2 x2apic movbe po
pcnt tsc_deadline_timer aes xsave avx f16c rdrand hypervisor lahf_lm abm cpuid_fault in
vpcid_single pti fsgsbase bmi1 avx2 smep bmi2 erms invpcid xsaveopt
bugs           : cpu_meltdown spectre_v1 spectre_v2 spec_store_bypass l1tf mds swapgs
itlb_multihit mmio_stale_data
bogomips       : 4800.04
clflush size   : 64
cache_alignme nt : 64
address sizes  : 46 bits physical, 48 bits virtual
power management:

ubuntu@ip-172-31-94-84:~$ |

```

- cpuid|more:

```

ubuntu@ip-172-31-94-84:~$ cpuid|more
CPU 0:
  vendor_id = "GenuineIntel"
  version information (1/eax):
    processor type = primary processor (0)
    family         = 0x6 (6)
    model          = 0xf (15)
    stepping id    = 0x2 (2)
    extended family = 0x0 (0)
    extended model = 0x3 (3)
    (family synth) = 0x6 (6)
    (model synth)  = 0x3f (63)
    (simple synth)  = Intel (unknown type) (Haswell C1/M1/R2) {Haswell}, 22nm
  miscellaneous (1/ebx):
    process local APIC physical ID = 0x0 (0)
    cpu count                       = 0x1 (1)
    CLFLUSH line size               = 0x8 (8)
    brand index                     = 0x0 (0)
  brand id = 0x00 (0): unknown
  feature information (1/edx):
    x87 FPU on chip                = true
    VME: virtual-8086 mode enhancement = true
    DE: debugging extensions       = true
    PSE: page size extensions      = true
    TSC: time stamp counter        = true
    RDMSR and WRMSR support        = true
    PAE: physical address extensions = true
    MCE: machine check exception   = true
    CMPXCHG8B inst.                = true
    APIC on chip                   = true
    SYSENTER and SYSEXIT           = true
    MTRR: memory type range registers = true
    PTE global bit                 = true
    MCA: machine check architecture = true
    CMOV: conditional move/compare instr = true
    PAT: page attribute table      = true
    PSE-36: page size extension    = true
    PSN: processor serial number   = false
    CLFLUSH instruction            = true
    DS: debug store                = false
    ACPI: thermal monitor and clock ctrl = false
    MMX Technology                 = true
    FXSAVE/FXRSTOR                 = true
    SSE extensions                 = true
    SSE2 extensions                = true
    SS: self snoop                 = false
    hyper-threading / multi-core supported = true
    TM: therm. monitor             = false
    IA64                           = false
    PBE: pending break event       = false
  feature information (1/ecx):
    PNI/SSE3: Prescott New Instructions = true

```

- df:

Mostra quantidade de espaço usada no disco rígido (disk file)

```
ubuntu@ip-172-31-94-84:~$ df
Filesystem      1K-blocks    Used Available Use% Mounted on
/dev/root        20134592 2202368  17915840  11% /
devtmpfs         487876      0    487876    0% /dev
tmpfs            494716      0    494716    0% /dev/shm
tmpfs            98944       832    98112    1% /run
tmpfs            5120        0     5120    0% /run/lock
tmpfs            494716      0    494716    0% /sys/fs/cgroup
/dev/loop1       56960      56960          0 100% /snap/core18/2409
/dev/loop0       25728      25728          0 100% /snap/amazon-ssm-agent/5656
/dev/loop2       56960      56960          0 100% /snap/core18/2566
/dev/loop3       63488      63488          0 100% /snap/core20/1518
/dev/loop4       64768      64768          0 100% /snap/core20/1623
/dev/loop5       69504      69504          0 100% /snap/lxd/22753
/dev/loop6       48128      48128          0 100% /snap/snapd/16010
/dev/loop7       49152      49152          0 100% /snap/snapd/16778
/dev/xvda15      106858      5321    101537    5% /boot/efi
tmpfs            98940        0    98940    0% /run/user/1000
ubuntu@ip-172-31-94-84:~$
```

- free:

mostra a quantidade de memória total, em uso e disponível, bem como informações de cachê e swap. As opções “-b”, “-k” e “-m” mostram a quantidade em bytes, kbytes e megabytes respectivamente.

```
ubuntu@ip-172-31-94-84:~$ free
              total        used        free      shared  buff/cache   available
Mem:           989436      189352      134244         832       665840       639176
Swap:              0           0           0
ubuntu@ip-172-31-94-84:~$
```

- hardinfo:

HardInfo (abreviação de " informações de hardware ") é uma ferramenta gráfica de perfil de sistema e benchmark para sistemas Linux, que é capaz de coletar informações tanto do hardware quanto de algum software e organizá-los em uma ferramenta de GUI fácil de usar. O HardInfo pode mostrar informações sobre esses componentes: CPU, GPU, Motherboard, RAM, Armazenamento, Disco Rígido, Impressoras, etc.

```
ubuntu@ip-172-31-94-84:~$ hardinfo
```

Computer

- Summary
- Operating System
- Kernel Modules
- Boots
- Languages
- Filesystems
- Display
- Environment Variables
- Development
- Users
- Groups

Devices

- Processor
- Memory
- PCI Devices
- USB Devices
- Printers
- Battery
- Sensors
- Input Devices
- Storage
- DMI
- Memory SPD
- Resources

Network

- Interfaces
- IP Connections
- Routing Table
- ARP Table
- DNS Servers
- Statistics
- Shared Directories

Benchmarks

- CPU Blowfish

```

Summary
-----

-Computer-
Processor           : Intel(R) Xeon(R) CPU E5-2676 v3 @ 2.40GHz
Memory              : 989MB (320MB used)
Machine Type        : Virtual (Xen)
Operating System     : Ubuntu 20.04.5 LTS
User Name           : ubuntu (Ubuntu)
Date/Time            : Thu Sep 15 22:53:39 2022
-Display-
Resolution          : 0x0 pixels
OpenGL Renderer      : (Unknown)
X11 Vendor           : (null)
-Audio Devices-
-Input Devices-
Power Button
Sleep Button
AT Translated Set 2 keyboard
ImExPS/2 Generic Explorer Mouse
-Printers-
No printers found

Operating System
-----

-Version-
Kernel              : Linux 5.15.0-1019-aws (x86_64)
Version             : #23~20.04.1-Ubuntu SMP Thu Aug 18 03:20:14 UTC 2022
C Library            : GNU C Library / (Ubuntu GLIBC 2.31-0ubuntu9.9) 2.31
Distribution         : Ubuntu 20.04.5 LTS
-Current Session-
Computer Name        : ip-172-31-94-84
User Name            : ubuntu (Ubuntu)
Language             : C.UTF-8 (C.UTF-8)
Home Directory       : /home/ubuntu
-Misc-
Uptime               : 27 minutes
Load Average         : 0.42, 0.12, 0.04
Available entropy in /dev/random : 256 bits (medium)

Kernel Modules
-----

```

- inxi -C:

Para ver informações gerais apenas da CPU.

```

ubuntu@ip-172-31-94-84:~$ inxi -C
CPU:      Topology: Single Core model: Intel Xeon E5-2676 v3 bits: 64 type: MCP L2 cache: 30.0 MiB
          Speed: 2400 MHz min/max: N/A Core speed (MHz): 1: 2400
ubuntu@ip-172-31-94-84:~$

```

- likwid-topology:

Depois de algumas informações básicas da máquina, a likwid-topology imprime a topologia de topologia de linha de hardware da máquina. Ele numera os processadores na coluna HWThread à medida que aparecem no Sistema Operacional Linux. O segmento significa número de segmento SMT dentro de um núcleo. O núcleo é o número do núcleo da CPU física.


```

ubuntu@ip-172-31-94-84:~$ likwid-topology
-----
CPU name:      Intel(R) Xeon(R) CPU E5-2676 v3 @ 2.40GHz
CPU type:      Intel Xeon Haswell EN/EP/EX processor
CPU stepping:  2
*****
Hardware Thread Topology
*****
Sockets:       1
Cores per socket: 1
Threads per core: 1
-----
HwThread      Thread      Core      Socket      Available
0              0              0          0            *
-----
Socket 0:      ( 0 )
-----
*****
Cache Topology
*****
Level:         1
Size:          32 kB
Cache groups:  ( 0 )
-----
Level:         2
Size:          256 kB
Cache groups:  ( 0 )
-----
Level:         3
Size:          30 MB
Cache groups:  ( 0 )
-----
*****
NUMA Topology
*****
NUMA domains:  1
-----
Domain:        0
Processors:    ( 0 )
Distances:     10
Free memory:   136.129 MB
Total memory:  966.246 MB
-----
ubuntu@ip-172-31-94-84:~$

```

- lscpu:

Este comando retorna informações sobre o processador e unidades de processamento, não possui outras opções.

```

ubuntu@ip-172-31-94-84:~$ lscpu
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:            Little Endian
Address sizes:          46 bits physical, 48 bits virtual
CPU(s):                1
On-line CPU(s) list:   0
Thread(s) per core:    1
Core(s) per socket:    1
Socket(s):              1
NUMA node(s):          1
Vendor ID:              GenuineIntel
CPU family:             6
Model:                 63
Model name:             Intel(R) Xeon(R) CPU E5-2676 v3 @ 2.40GHz
Stepping:               2
CPU MHz:               2400.037
BogoMIPS:               4800.04
Hypervisor vendor:     Xen
Virtualization type:    full
L1d cache:             32 KiB
L1i cache:             32 KiB
L2 cache:              256 KiB
L3 cache:              30 MiB
NUMA node0 CPU(s):     0
Vulnerability itlb_mltihit: KVM: Mitigation: VMX unsupported
Vulnerability L1tf:     Mitigation: PTE Inversion
Vulnerability Mds:      Vulnerable; Clear CPU buffers attempted, no microcode; SMT Host state unknown
Vulnerability Meltdown: Mitigation: PTI
Vulnerability Mmio stale data: Vulnerable; Clear CPU buffers attempted, no microcode; SMT Host state unknown
Vulnerability Retbleed: Not affected
Vulnerability Spec store bypass: Vulnerable
Vulnerability Spectre v1: Mitigation: usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation: Retpolines, STIBP disabled, RSB filling
Vulnerability Srbds:    Not affected
Vulnerability Tsx async abort: Not affected
Flags:                  fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall nx rdtscp lm constant_tsc rep_good nopl
                        xtopology cpuid tsc_known_freq pni pclmulqdq ssse3 fma cx16 pcid sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand h
                        ypervisor lahf_lm abm cpuid_fault invpcid_single pti fsgsbase bmi1 avx2 smep bmi2 erms invpcid xsaveopt
ubuntu@ip-172-31-94-84:~$

```

- Lshw:

Utilitário para uso geral, fornece informações tanto detalhadas como resumidas sobre diferentes unidades de hardware como cpu, memória, disco, controladoras usb, adaptadores de rede etc. Este comando extrai as informações dos arquivos no diretório /proc.

```

ubuntu@ip-172-31-94-84:~$ lshw
WARNING: you should run this program as super-user.
ip-172-31-94-84
  description: Computer
  width: 64 bits
  capabilities: vsyscall32
*-core
  description: Motherboard
  physical id: 0
*-memory
  description: System memory
  physical id: 0
  size: 1GiB
*-cpu
  product: Intel(R) Xeon(R) CPU E5-2676 v3 @ 2.40GHz
  vendor: Intel Corp.
  physical id: 1
  bus info: cpu@0
  width: 64 bits
  capabilities: fpu fpu_exception wp vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall nx rdtscp x86-64 constant_tsc
  rep_good nopl xtopology cpuid tsc_known_freq pni pclmulqdq ssse3 fma cx16 pcid sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand hypervisor lah
  f_lm abm cpuid_fault invpcid_single pti fsgsbase bmi1 avx2 smep bmi2 erms invpcid xsaveopt
*-pci
  description: Host bridge
  product: 440FX - 82441FX PMC [Natoma]
  vendor: Intel Corporation
  physical id: 100
  bus info: pci@0000:00:00.0
  version: 02
  width: 32 bits
  clock: 33MHz
*-isa
  description: ISA bridge
  product: 82371SB PIIX3 ISA [Natoma/Triton II]
  vendor: Intel Corporation
  physical id: 1
  bus info: pci@0000:00:01.0
  version: 00
  width: 32 bits
  clock: 33MHz
  capabilities: isa
  configuration: latency=0
*-ide
  description: IDE interface
  product: 82371SB PIIX3 IDE [Natoma/Triton II]
  vendor: Intel Corporation
  physical id: 1.1
  bus info: pci@0000:00:01.1
  version: 00
  width: 32 bits
  clock: 33MHz
  capabilities: ide isa compat-mode bus-master

```

- Istopo:

O comando Itopo é usado para mostrar a topologia do sistema. Ele fornece informações sobre os núdulos de memória NUMA, caches compartilhados, pacotes de CPU, núcleos de processador e threads e muito mais.

```
ubuntu@ip-172-31-94-84:~$ lstopo
Machine (966MB total)
  Package L#0
    NUMANode L#0 (P#0 966MB)
    L3 L#0 (30MB) + L2 L#0 (256KB) + L1d L#0 (32KB) + L1i L#0 (32KB) + Core L#0 + PU L#0 (P#0)
  HostBridge
    PCI 00:01.1 (IDE)
    PCI 00:02.0 (VGA)
  Block "xvda"
  Net "eth0"
ubuntu@ip-172-31-94-84:~$
```

- top:

Mostra os processos consumindo memória.

```
top - 23:09:52 up 43 min, 1 user, load average: 0.05, 0.02, 0.03
Tasks: 98 total, 1 running, 97 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.0 us, 0.0 sy, 0.0 ni,100.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 966.2 total, 123.9 free, 196.4 used, 645.9 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used, 595.3 avail Mem

  PID USER      PR  NI  VIRT  RES  SHR S %CPU  %MEM    TIME+  COMMAND
    1 root        20   0 169216 12704 8364 S   0.0   1.3   0:05.15 systemd
    2 root        20   0      0      0    0 S   0.0   0.0   0:00.00 kthreadd
    3 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 rcu_gp
    4 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 rcu_par_gp
    5 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 netns
    6 root        20   0      0      0    0 I   0.0   0.0   0:00.21 kworker/0:0-events
    7 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 kworker/0:0H-events_highpri
    9 root        0 -20    0      0    0 I   0.0   0.0   0:00.27 kworker/0:1H-events_highpri
   10 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 mm_percpu_wq
   11 root        20   0      0      0    0 S   0.0   0.0   0:00.00 rcu_tasks_rude_
   12 root        20   0      0      0    0 S   0.0   0.0   0:00.00 rcu_tasks_trace
   13 root        20   0      0      0    0 S   0.0   0.0   0:00.17 ksoftirqd/0
   14 root        20   0      0      0    0 I   0.0   0.0   0:00.64 rcu_sched
   15 root        rt    0      0      0    0 S   0.0   0.0   0:00.01 migration/0
   16 root       -51   0      0      0    0 S   0.0   0.0   0:00.00 idle_inject/0
   18 root        20   0      0      0    0 S   0.0   0.0   0:00.00 cpuhp/0
   19 root        20   0      0      0    0 S   0.0   0.0   0:00.00 kdevtmpfs
   20 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 inet_frag_wq
   21 root        20   0      0      0    0 S   0.0   0.0   0:00.00 kauditd
   22 root        20   0      0      0    0 S   0.0   0.0   0:00.00 khungtaskd
   23 root        20   0      0      0    0 S   0.0   0.0   0:00.00 oom_reaper
   24 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 writeback
   25 root        20   0      0      0    0 S   0.0   0.0   0:00.06 kcompactd0
   26 root        25   3      0      0    0 S   0.0   0.0   0:00.00 ksm
   27 root        39  19      0      0    0 S   0.0   0.0   0:00.00 khugepaged
   73 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 kintegrityd
   74 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 kblockd
   75 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 blkcg_punt_bio
   76 root        20   0      0      0    0 S   0.0   0.0   0:00.00 xen-balloon
   77 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 tpm_dev_wq
   78 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 ata_sff
   79 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 md
   80 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 edac-poller
   81 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 devfreq_wq
   82 root       -51   0      0      0    0 S   0.0   0.0   0:00.00 watchdogd
   85 root        20   0      0      0    0 S   0.0   0.0   0:00.20 kswapd0
   86 root        20   0      0      0    0 S   0.0   0.0   0:00.00 ecryptfs-kthrea
   88 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 kthrotld
   89 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 acpi_thermal_pm
   90 root        20   0      0      0    0 S   0.0   0.0   0:00.00 xenbus
   91 root        20   0      0      0    0 S   0.0   0.0   0:00.01 xenwatch
   92 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 nvme-wq
   93 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 nvme-reset-wq
   94 root        0 -20    0      0    0 I   0.0   0.0   0:00.00 nvme-delete-wq
   95 root        20   0      0      0    0 S   0.0   0.0   0:00.00 scsi_ah_0
```

- sudo dmidecode:

Além da quantidade de memória presente no nosso computador, o comando **dmidecode** nos fornece o **tipo**, a **velocidade** e a **quantidade máxima de memória** possível no nosso hardware, bem como a **quantidade de slots** presentes (vazios e ocupados) etc.

```
ubuntu@ip-172-31-94-84:~$ sudo dmidecode
# dmidecode 3.2
Getting SMBIOS data from sysfs.
SMBIOS 2.7 present.
11 structures occupying 378 bytes.
Table at 0x000EB01F.

Handle 0x0000, DMI type 0, 24 bytes
BIOS Information
    Vendor: Xen
    Version: 4.11.amazon
    Release Date: 08/24/2006
    Address: 0xE8000
    Runtime Size: 96 kB
    ROM Size: 64 kB
    Characteristics:
        PCI is supported
        EDD is supported
        Targeted content distribution is supported
    BIOS Revision: 4.11

Handle 0x0100, DMI type 1, 27 bytes
System Information
    Manufacturer: Xen
    Product Name: HVM domU
    Version: 4.11.amazon
    Serial Number: ec2f109d-e09b-9eaa-37f7-c5e1834ecdff
    UUID: ec2f109d-e09b-9eaa-37f7-c5e1834ecdff
    Wake-up Type: Power Switch
    SKU Number: Not Specified
    Family: Not Specified

Handle 0x0300, DMI type 3, 21 bytes
Chassis Information
    Manufacturer: Xen
    Type: Other
    Lock: Not Present
    Version: Not Specified
    Serial Number: Not Specified
    Asset Tag: Not Specified
    Boot-up State: Safe
    Power Supply State: Safe
    Thermal State: Safe
    Security Status: Unknown
    OEM Information: 0x00000000
    Height: Unspecified
    Number Of Power Cords: Unspecified
    Contained Elements: 0

Handle 0x0401, DMI type 4, 35 bytes
Processor Information
    Socket Designation: CPU 1
```

