Logs linux

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CPU Info

Le plus simple (et le plus efficace ?) pour obtenir les informations processeur est de simplement lire le fichier **/proc/cpuinfo**

```
cat /proc/cpuinfo
```

La sortie contient beaucoup d'informations :

```
processor       : 0
vendor_id       : GenuineIntel
cpu family      : 6
model           : 58
model name      : Intel(R) Pentium(R) CPU G2030 @ 3.00GHz
stepping        : 9
microcode       : 0x15
cpu MHz         : 1600.000
cache size      : 3072 KB
physical id     : 0
siblings        : 2
core id         : 0
cpu cores       : 2
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 ...
bogomips        : 5986.82
clflush size    : 64
cache_alignment : 64
address sizes   : 36 bits physical, 48 bits virtual
```

power management:

Avec ce fichier, vous pouvez par exemple connaître le nombre de coeur(s) :

```
cat /proc/cpuinfo | grep -i "^processor" | wc -l
```

Afficher le nom du modèle :

```
cat /proc/cpuinfo | grep -i "^model name" | awk -F": " '{print $2}' | head -1 | sed
's/ \+/ /g'
```

Ou encore afficher sa fréquence :

```
cat /proc/cpuinfo | grep -i "^cpu MHz" | awk -F": " '{print $2}' | head -1
```

Vous l'aurez compris, avec ce /proc/cpuinfo, on peut ressortir les infos comme on le souhaite. D'ailleurs, la plupart des outils / commandes listées ci-dessous l'utilise !

lscpu

La commande lscpu permet d'afficher l'architecture du CPU en utilisant sysfs et bien sûr /proc/cpuinfo.

```
lscpu
```

Voici le retour :

```
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:            Little Endian
CPU(s):                2
On-line CPU(s) list:   0,1
Thread(s) per core:    1
Core(s) per socket:    2
Socket(s):             1
NUMA node(s):          1
Vendor ID:             GenuineIntel
CPU family:            6
Model:                 58
Stepping:              9
CPU MHz:               1600.000
BogoMIPS:              5986.36
Virtualization:        VT-x
L1d cache:             32K
L1i cache:             32K
L2 cache:              256K
L3 cache:              3072K
NUMA node0 CPU(s):     0,1
```

dmidecode

Le programme dmidecode récupère les informations du système grâce au standard SMBIOS/DMI. On y retrouve donc toutes les informations relatives au BIOS, carte mère, processeur, mémoire, connectiques, ...

```
dmidecode --type processor
```

Voici la sortie pour les informations processeur :

```
# dmidecode 2.11
SMBIOS 2.7 present.
```

```
Handle 0x000B, DMI type 4, 42 bytes
Processor Information
    Socket Designation: CPUSocket
    Type: Central Processor
    Family: Pentium
    Manufacturer: Intel(R) Corporation
    ID: A9 06 03 00 FF FB EB BF
    Signature: Type 0, Family 6, Model 58, Stepping 9
    Flags:
        FPU (Floating-point unit on-chip)
```

```
        VME (Virtual mode extension)
        DE (Debugging extension)
        PSE (Page size extension)
        TSC (Time stamp counter)
        MSR (Model specific registers)
        PAE (Physical address extension)
        MCE (Machine check exception)
        CX8 (CMPXCHG8 instruction supported)
        APIC (On-chip APIC hardware supported)
        SEP (Fast system call)
        MTRR (Memory type range registers)
        PGE (Page global enable)
        MCA (Machine check architecture)
        CMOV (Conditional move instruction supported)
        PAT (Page attribute table)
        PSE-36 (36-bit page size extension)
        CLFSH (CLFLUSH instruction supported)
        DS (Debug store)
        ACPI (ACPI supported)
        MMX (MMX technology supported)
        FXSR (FXSAVE and FXSTOR instructions supported)
        SSE (Streaming SIMD extensions)
        SSE2 (Streaming SIMD extensions 2)
        SS (Self-snoop)
        HTT (Multi-threading)
        TM (Thermal monitor supported)
        PBE (Pending break enabled)
    Version: Intel(R) Pentium(R) CPU G2030 @ 3.00GHz
    Voltage: 5.0 V 2.9 V
    External Clock: 100 MHz
    Max Speed: 3800 MHz
    Current Speed: 3000 MHz
    Status: Populated, Enabled
    Upgrade: Socket BGA1155
    L1 Cache Handle: 0x0008
    L2 Cache Handle: 0x0007
    L3 Cache Handle: 0x0009
    Serial Number: Not Specified
    Asset Tag: Fill By OEM
    Part Number: Fill By OEM
    Core Count: 2
    Core Enabled: 2
    Thread Count: 2
    Characteristics: 64-bit capable
```

lshw

lshw est un programme permettant d'extraire des informations détaillées de la configuration matérielle de la machine. Pratique, il peut en outre exporter le résultat dans différents formats

(HTML, XML, JSON, ...).

```
lshw -C CPU
```

Voici la sortie pour la class CPU :

```
*-cpu*
description: CPU
produit: Intel(R) Pentium(R) CPU G2030 @ 3.00GHz
fabriquant: Intel Corp.
identifiant matériel: b
information bus: cpu@0
version: Intel(R) Pentium(R) CPU G2030 @ 3.00GHz
emplacement: CPUSocket
taille: 1600MHz
capacité: 3800MHz
bits: 64 bits
horloge: 100MHz
fonctionnalités: x86-64 fpu fpu_exception wp vme ...
configuration: cores=2 enabledcores=2 threads=2
hwinfo
hwinfo permet d'afficher les informations matérielles d'un ordinateur.
```

```
hwinfo --cpu
```

Résultat des informations du CPU :

```
01: None 00.0: 10103 CPU
  [Created at cpu.304]
  Unique ID: rdCR.j8NaKXDZtZ6
  Hardware Class: cpu
  Arch: X86-64
  Vendor: "GenuineIntel"
  Model: 6.58.9 "Intel(R) Pentium(R) CPU G2030 @ 3.00GHz"
  Features: fpu,vme,de,pse,tsc,msr,pae,...
  Clock: 1600 MHz
  BogoMips: 5986.82
  Cache: 3072 kb
  Units/Processor: 16
  Config Status: cfg=new, avail=yes, need=no, active=unknown
```

cpuid

Le paquet cpuid doit être installé au préalable. Cette commande permet d'obtenir les informations concernant un CPU x86.

```
cpuid
```

Retour :

```
Vendor ID: "GenuineIntel"; CPUID level 13
```

```
Intel-specific functions:
Version 000306a9:
Type 0 - Original OEM
Family 6 - Pentium Pro
Model 10 -
Stepping 9
Reserved 12
```

```
Extended brand string: "        Intel(R) Pentium(R) CPU G2030 @ 3.00GHz"
CLFLUSH instruction cache line size: 8
Initial APIC ID: 2
Hyper threading siblings: 16
```

```
Feature flags bfebfbff:
FPU    Floating Point Unit
VME    Virtual 8086 Mode Enhancements
DE     Debugging Extensions
PSE    Page Size Extensions
TSC    Time Stamp Counter
MSR    Model Specific Registers
PAE    Physical Address Extension
MCE    Machine Check Exception
CX8    COMPXCHG8B Instruction
APIC   On-chip Advanced Programmable Interrupt Controller present and enabled
SEP    Fast System Call
MTRR   Memory Type Range Registers
PGE    PTE Global Flag
MCA    Machine Check Architecture
CMOV   Conditional Move and Compare Instructions
FGPAT  Page Attribute Table
PSE-36 36-bit Page Size Extension
CLFSH  CFLUSH instruction
DS     Debug store
ACPI   Thermal Monitor and Clock Ctrl
MMX    MMX instruction set
FXSR   Fast FP/MMX Streaming SIMD Extensions save/restore
SSE    Streaming SIMD Extensions instruction set
SSE2   SSE2 extensions
SS     Self Snoop
HT     Hyper Threading
TM     Thermal monitor
31     reserved
```

```
TLB and cache info:
5a: unknown TLB/cache descriptor
03: Data TLB: 4KB pages, 4-way set assoc, 64 entries
```