Architecture of the computer

Using command “lscpu”

Architecture x64

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fundacion@fundalap-nh95:~$ lscpu
Architecture:                         x86_64
CPU op-mode(s):                       32-bit, 64-bit
Byte Order:                           Little Endian
Address sizes:                        39 bits physical, 48 bits virtual
CPU(s):                               8
On-line CPU(s) list:                  0-7
Thread(s) per core:                   2
Core(s) per socket:                   4
Socket(s):                            1
NUMA node(s):                         1
Vendor ID:                            GenuineIntel
CPU family:                           6
Model:                                142
Model name:                           Intel(R) Core(TM) i7-8565U CPU @ 1.80GHz
Stepping:                             12
CPU MHz:                              2000.000
CPU max MHz:                          4600,0000
CPU min MHz:                          400,0000
BogoMIPS:                             3999.93
Virtualization:                       VT-x
L1d cache:                            128 KiB
L1i cache:                            128 KiB
L2 cache:                             1 MiB
L3 cache:                             8 MiB
NUMA node0 CPU(s):                    0-7
Vulnerability Gather data sampling: Mitigation; Microcode
Vulnerability Itlb multihit:          KVM: Mitigation: VMX disabled
Vulnerability L1tf:                   Not affected
Vulnerability Mds:                    Not affected
Vulnerability Meltdown:               Not affected
Vulnerability Mmio stale data:        Mitigation; Clear CPU buffers; SMT vulnerabl
                                      e
Vulnerability Retbleed:               Mitigation; Enhanced IBRS
Vulnerability Spec rstack overflow: Not affected
Vulnerability Spec store bypass:      Mitigation; Speculative Store Bypass disable
                                      d via prctl and seccomp
Vulnerability Spectre v1:             Mitigation; usercopy/swapgs barriers and __u
                                      ser pointer sanitization
Vulnerability Spectre v2:             Mitigation; Enhanced IBRS, IBPB conditional,
                                       RSB filling, PBRSB-eIBRS SW sequence
Vulnerability Srbds:                  Mitigation; Microcode
Vulnerability Tsx async abort:        Not affected
```

x86_64: This is a CPU architecture developed by Intel and AMD, and is an extension of the x86 architecture (also known as IA-32). The term "x86_64" is also commonly known as "AMD64" or "Intel 64." This architecture is compatible with 64-bit systems, meaning it can handle much larger data sizes and memory addresses than 32-bit systems.

What means x32 and x64?

x32: This is a 32-bit architecture. This means that the CPU can handle data and memory addresses up to 32 bits in length.

x64: This is a 64-bit architecture, also known as x86_64 or AMD64 architecture. The CPU can handle data and memory addresses up to 64 bits in length.

Nomenclatures refer to how data is stored. As the name suggests, 32-bit systems store their data in 32-bit pieces, while the others do so in 64-bit pieces. This can mean that, generally, by working with larger "words" you can do more. in less time, making it easier for you to do more in less time.