Tina Borundia

C1-16

Practical 1

**Source File :**

#!/bin/bash

echo "Display linux system information"

uname -a

echo "================================================================"

echo "Display Kernel information"

uname -r

echo "================================================================="

echo "Show which version of red Hat installed"

cat /etc/os-release

echo "================================================================"

echo "Show how long the system has been running + loading"

uptime

echo "==============================================================="

echo "Show system host name"

hostname

echo "==============================================================================================================================="

echo "Show all local IP address of the host"

hostname -I

echo "==============================================================================================================================="

echo "Show system rebot history"

last reboot

echo "==============================================================================================================================="

echo "Show current date and time"

date

echo "==============================================================================================================================="

echo "Show this month's calender"

cal

echo "==============================================================================================================================="

echo "Display who is online"

w

echo "==============================================================================================================================="

echo "Who you are logged in as"

whoami

echo "==============================================================================================================================="

echo "Display the user and group ids of your current user"

id

echo "==============================================================================================================================="

echo "Display the last user who have logged onto the system"

system. last

echo "==============================================================================================================================="

echo "Show Who is logged into the system"

who

echo "==============================================================================================================================="

echo "Display CPU information"

cat /proc/cpuinfo

echo "==============================================================================================================================="

echo "Display the last user who have been logged onto the system"

cat /proc/meminfo

echo "==============================================================================================================================="

echo "Display free and used memory"

free -h

echo "==============================================================================================================================="

echo "Display PCI devicesr GB.)"

lspci -tv

echo "==============================================================================================================================="

echo "Display USB devices"

lsusb -tv

echo "==============================================================================================================================="

echo "Display Context Switching between processor"

cat /proc/stat

echo "==============================================================================================================================="

**Output :**

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rcoem@rcoem-Vostro-3910:~/c1tina$ ./Tinaprac1.sh

Display linux system information

Linux rcoem-Vostro-3910 5.15.0-46-generic #49~20.04.1-Ubuntu SMP Thu Aug 4 19:15:44 UTC 2022 x86\_64 x86\_64 x86\_64 GNU/Linux

================================================================

Display Kernel information

5.15.0-46-generic

=================================================================

Show which version of red Hat installed

NAME="Ubuntu"

VERSION="20.04.5 LTS (Focal Fossa)"

ID=ubuntu

ID\_LIKE=debian

PRETTY\_NAME="Ubuntu 20.04.5 LTS"

VERSION\_ID="20.04"

HOME\_URL="https://www.ubuntu.com/"

SUPPORT\_URL="https://help.ubuntu.com/"

BUG\_REPORT\_URL="https://bugs.launchpad.net/ubuntu/"

PRIVACY\_POLICY\_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"

VERSION\_CODENAME=focal

UBUNTU\_CODENAME=focal

================================================================

Show how long the system has been running + loading

16:11:28 up 1:27, 1 user, load average: 0.07, 0.13, 0.13

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Show system host name

rcoem-Vostro-3910

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Show all local IP address of the host

172.16.192.164

===============================================================================================================================

Show system rebot history

reboot system boot 5.15.0-46-generi Mon Jan 29 20:14 still running

reboot system boot 5.15.0-46-generi Thu Jan 25 14:30 - 17:16 (02:45)

reboot system boot 5.15.0-46-generi Thu Jan 25 10:06 - 13:01 (02:54)

reboot system boot 5.15.0-46-generi Thu Jan 25 14:46 - 10:01 (-4:45)

reboot system boot 5.15.0-46-generi Tue Jan 23 10:15 - 10:16 (00:00)

reboot system boot 5.15.0-46-generi Sat Jan 20 16:44 - 12:50 (-3:53)

reboot system boot 5.15.0-46-generi Sat Jan 20 07:01 - 07:02 (00:00)

reboot system boot 5.15.0-46-generi Sat Jan 20 03:44 - 05:31 (01:46)

reboot system boot 5.15.0-46-generi Fri Jan 19 10:35 - 10:36 (00:00)

wtmp begins Fri Jan 19 10:35:55 2024

===============================================================================================================================

Show current date and time

Monday 29 January 2024 04:11:28 PM IST

===============================================================================================================================

Show this month's calender

January 2024

Su Mo Tu We Th Fr Sa

1 2 3 4 5 6

7 8 9 10 11 12 13

14 15 16 17 18 19 20

21 22 23 24 25 26 27

28 29 30 31

===============================================================================================================================

Display who is online

16:11:28 up 1:27, 1 user, load average: 0.07, 0.13, 0.13

USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT

rcoem :0 :0 20:14 ?xdm? 6:01 0.01s /usr/lib/gdm3/gdm-x-session --run-script env GNOME\_SHELL\_SESSION\_MODE=ubuntu /usr/bin/gnome-session --s

===============================================================================================================================

Who you are logged in as

rcoem

===============================================================================================================================

Display the user and group ids of your current user

uid=1000(rcoem) gid=1000(rcoem) groups=1000(rcoem),4(adm),24(cdrom),27(sudo),30(dip),46(plugdev),120(lpadmin),132(lxd),133(sambashare)

===============================================================================================================================

Display the last user who have logged onto the system

./Tinaprac1.sh: line 52: system.: command not found

===============================================================================================================================

Show Who is logged into the system

rcoem :0 2024-01-29 20:14 (:0)

===============================================================================================================================

Display CPU information

processor : 0

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 942.904

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 0

cpu cores : 12

apicid : 0

initial apicid : 0

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 1

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 0

cpu cores : 12

apicid : 1

initial apicid : 1

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

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bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 2

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 4

cpu cores : 12

apicid : 8

initial apicid : 8

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 3

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 4

cpu cores : 12

apicid : 9

initial apicid : 9

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 4

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 8

cpu cores : 12

apicid : 16

initial apicid : 16

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 5

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 8

cpu cores : 12

apicid : 17

initial apicid : 17

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 6

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 934.118

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 12

cpu cores : 12

apicid : 24

initial apicid : 24

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

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bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 7

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 12

cpu cores : 12

apicid : 25

initial apicid : 25

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 8

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 999.802

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 16

cpu cores : 12

apicid : 32

initial apicid : 32

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 9

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 16

cpu cores : 12

apicid : 33

initial apicid : 33

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 10

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 1002.014

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 20

cpu cores : 12

apicid : 40

initial apicid : 40

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 11

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 20

cpu cores : 12

apicid : 41

initial apicid : 41

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 12

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 939.678

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 24

cpu cores : 12

apicid : 48

initial apicid : 48

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 13

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 24

cpu cores : 12

apicid : 49

initial apicid : 49

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 14

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 28

cpu cores : 12

apicid : 56

initial apicid : 56

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 15

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 28

cpu cores : 12

apicid : 57

initial apicid : 57

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 16

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 36

cpu cores : 12

apicid : 72

initial apicid : 72

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 17

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 37

cpu cores : 12

apicid : 74

initial apicid : 74

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 18

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 38

cpu cores : 12

apicid : 76

initial apicid : 76

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

processor : 19

vendor\_id : GenuineIntel

cpu family : 6

model : 151

model name : 12th Gen Intel(R) Core(TM) i7-12700

stepping : 2

microcode : 0x2c

cpu MHz : 2100.000

cache size : 25600 KB

physical id : 0

siblings : 20

core id : 39

cpu cores : 12

apicid : 78

initial apicid : 78

fpu : yes

fpu\_exception : yes

cpuid level : 32

wp : yes

flags : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ibpb stibp ibrs\_enhanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel\_pt sha\_ni xsaveopt xsavec xgetbv1 xsaves split\_lock\_detect avx\_vnni dtherm ida arat pln pts hwp hwp\_notify hwp\_act\_window hwp\_epp hwp\_pkg\_req umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md\_clear serialize pconfig arch\_lbr flush\_l1d arch\_capabilities

vmx flags : vnmi preemption\_timer posted\_intr invvpid ept\_x\_only ept\_ad ept\_1gb flexpriority apicv tsc\_offset vtpr mtf vapic ept vpid unrestricted\_guest vapic\_reg vid ple shadow\_vmcs ept\_mode\_based\_exec tsc\_scaling usr\_wait\_pause

bugs : spectre\_v1 spectre\_v2 spec\_store\_bypass swapgs

bogomips : 4224.00

clflush size : 64

cache\_alignment : 64

address sizes : 46 bits physical, 48 bits virtual

power management:

===============================================================================================================================

Display the last user who have been logged onto the system

MemTotal: 16065424 kB

MemFree: 12788356 kB

MemAvailable: 13628496 kB

Buffers: 51008 kB

Cached: 1467772 kB

SwapCached: 0 kB

Active: 533156 kB

Inactive: 1772424 kB

Active(anon): 3684 kB

Inactive(anon): 1246096 kB

Active(file): 529472 kB

Inactive(file): 526328 kB

Unevictable: 447528 kB

Mlocked: 0 kB

SwapTotal: 2097148 kB

SwapFree: 2097148 kB

Dirty: 52 kB

Writeback: 0 kB

AnonPages: 1234520 kB

Mapped: 383668 kB

Shmem: 469920 kB

KReclaimable: 84960 kB

Slab: 209016 kB

SReclaimable: 84960 kB

SUnreclaim: 124056 kB

KernelStack: 15240 kB

PageTables: 22396 kB

NFS\_Unstable: 0 kB

Bounce: 0 kB

WritebackTmp: 0 kB

CommitLimit: 10129860 kB

Committed\_AS: 5705748 kB

VmallocTotal: 34359738367 kB

VmallocUsed: 42900 kB

VmallocChunk: 0 kB

Percpu: 19008 kB

HardwareCorrupted: 0 kB

AnonHugePages: 0 kB

ShmemHugePages: 0 kB

ShmemPmdMapped: 0 kB

FileHugePages: 0 kB

FilePmdMapped: 0 kB

HugePages\_Total: 0

HugePages\_Free: 0

HugePages\_Rsvd: 0

HugePages\_Surp: 0

Hugepagesize: 2048 kB

Hugetlb: 0 kB

DirectMap4k: 285812 kB

DirectMap2M: 5687296 kB

DirectMap1G: 11534336 kB

===============================================================================================================================

Display free and used memory

total used free shared buff/cache available

Mem: 15Gi 1.6Gi 12Gi 458Mi 1.5Gi 12Gi

Swap: 2.0Gi 0B 2.0Gi

===============================================================================================================================

Display PCI devicesr GB.)

-[0000:00]-+-00.0 Intel Corporation Device 4668

+-02.0 Intel Corporation Device 4680

+-04.0 Intel Corporation Device 461d

+-14.0 Intel Corporation Device 7ae0

+-14.2 Intel Corporation Device 7aa7

+-14.3 Intel Corporation Device 7af0

+-16.0 Intel Corporation Device 7ae8

+-17.0 Intel Corporation Device 7ae2

+-1a.0-[01]----00.0 Micron/Crucial Technology Device 540a

+-1c.0-[02]----00.0 Realtek Semiconductor Co., Ltd. RTL8111/8168/8411 PCI Express Gigabit Ethernet Controller

+-1d.0-[03-04]----00.0-[04]--

+-1f.0 Intel Corporation Device 7a86

+-1f.3 Intel Corporation Device 7ad0

+-1f.4 Intel Corporation Device 7aa3

\-1f.5 Intel Corporation Device 7aa4

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Display USB devices

/: Bus 02.Port 1: Dev 1, Class=root\_hub, Driver=xhci\_hcd/10p, 20000M

ID 1d6b:0003 Linux Foundation 3.0 root hub

/: Bus 01.Port 1: Dev 1, Class=root\_hub, Driver=xhci\_hcd/16p, 480M

ID 1d6b:0002 Linux Foundation 2.0 root hub

|\_\_ Port 7: Dev 2, If 0, Class=Human Interface Device, Driver=usbhid, 1.5M

ID 413c:2113 Dell Computer Corp.

|\_\_ Port 7: Dev 2, If 1, Class=Human Interface Device, Driver=usbhid, 1.5M

ID 413c:2113 Dell Computer Corp.

|\_\_ Port 8: Dev 3, If 0, Class=Human Interface Device, Driver=usbhid, 1.5M

ID 413c:301a Dell Computer Corp.

|\_\_ Port 14: Dev 4, If 0, Class=Wireless, Driver=btusb, 12M

ID 8087:0026 Intel Corp.

|\_\_ Port 14: Dev 4, If 1, Class=Wireless, Driver=btusb, 12M

ID 8087:0026 Intel Corp.

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Display Context Switching between processor

cpu 33064 6258 18868 10364302 2507 0 4152 0 0 0

cpu0 2141 2 1243 517858 55 0 5 0 0 0

cpu1 96 1 164 521240 5 0 221 0 0 0

cpu2 1639 10 951 518481 154 0 222 0 0 0

cpu3 113 6 101 521449 6 0 221 0 0 0

cpu4 1744 11 924 518530 61 0 218 0 0 0

cpu5 62 0 86 521465 97 0 197 0 0 0

cpu6 1724 5 1112 518539 80 0 205 0 0 0

cpu7 178 0 219 520238 8 0 347 0 0 0

cpu8 8002 6056 4774 501412 368 0 247 0 0 0

cpu9 43 0 31 521879 36 0 4 0 0 0

cpu10 6242 130 2616 511450 196 0 185 0 0 0

cpu11 128 3 445 519123 547 0 808 0 0 0

cpu12 4177 3 2120 514364 96 0 247 0 0 0

cpu13 368 2 423 520013 239 0 81 0 0 0

cpu14 3644 18 1866 515154 94 0 216 0 0 0

cpu15 67 1 92 521389 129 0 224 0 0 0

cpu16 1418 1 874 518841 16 0 244 0 0 0

cpu17 781 0 492 520453 33 0 0 0 0 0

cpu18 277 0 198 521106 13 0 254 0 0 0

cpu19 216 0 130 521309 264 0 0 0 0 0

intr 3733870 0 0 0 0 0 0 0 0 0 6526 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 64618 0 19 0 4570 3928 5416 9143 5999 3136 966 1643 46 435199 33991 34100 30315 30344 29667 29892 29447 29496 29336 30532 29726 29696 0 30238 30270 3 304054 16157 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

ctxt 8277317

btime 1706519668

processes 4429

procs\_running 2

procs\_blocked 0

softirq 3843346 356611 396877 24 865723 968 0 11611 1081808 0 1129724

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