

SPEC CPU®2017 Integer Speed Result

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My Corporation

SPECspeed®2017_int_base = 9.31

SPECspeed®2017_int_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)

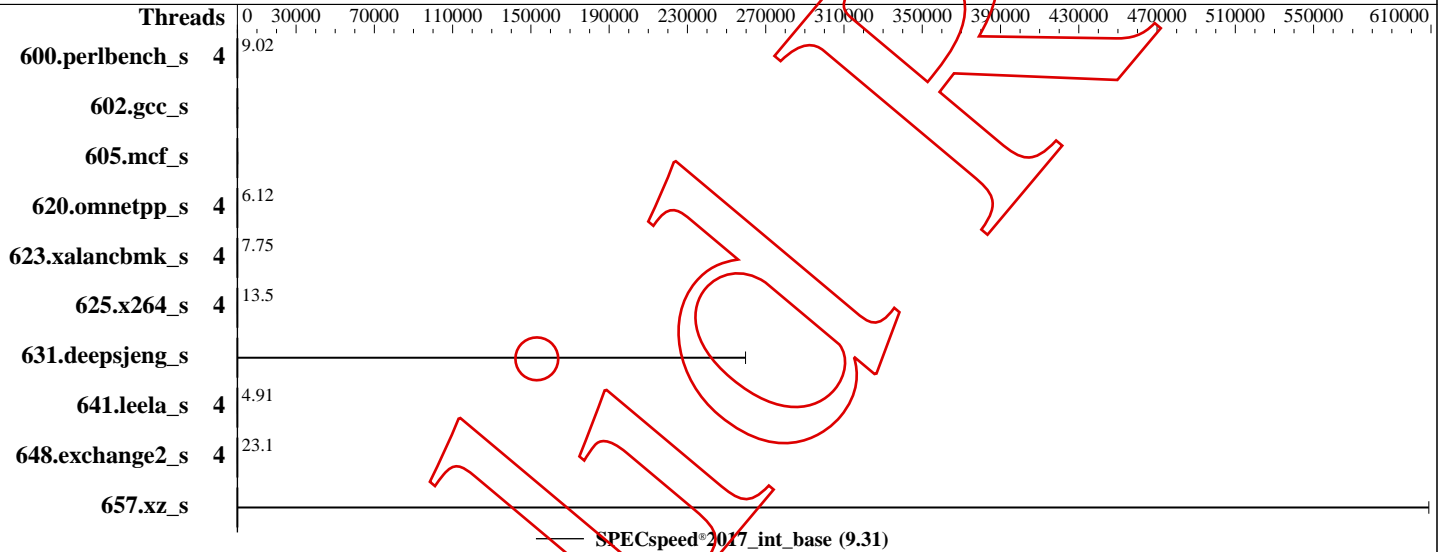
Test Sponsor: My Corporation

Tested by: My Corporation

Test Date: Oct-2024

Hardware Availability:

Software Availability:



Hardware

CPU Name: 06/8f
Max MHz:
Nominal:
Enabled: cores, 1 chip, threads/core
Orderable:
Cache L1:
L2:
L3:
Other:
Memory: 1.785 GB fixme: If using DDR4, the format is:
'N GB (N x N GB nRxn PC4-nnnnX-X)'
Storage: 51 GB add more disk info here
Other:

Software

OS: Ubuntu 24.04 LTS
6.8.0-35-generic
Compiler: C/C++/Fortran: Version 10.1.0 of GCC, the GNU Compiler Collection
Parallel: Yes
Firmware:
File System: ext4
System State: Run level 5 (add definition here)
Base Pointers: 64-bit
Peak Pointers: Not Applicable
Other:
Power Management:

Errors

'reportable' flag not set during run
641.leela_s (base) did not have enough runs!
600.perlbench_s (base) did not have enough runs!
631.deepsjeng_s (base) did not have enough runs!
620.omnetpp_s (base) did not have enough runs!
602.gcc_s (base) did not have enough runs!
605.mcf_s (base) did not have enough runs!
623.xalancbmk_s (base) did not have enough runs!
648.exchange2_s (base) did not have enough runs!
657.xz_s (base) did not have enough runs!
625.x264_s (base) did not have enough runs!

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Errors (Continued)

631.deepsjeng_s (base) had invalid runs!

602.gcc_s (base) had invalid runs!

605.mcf_s (base) had invalid runs!

657.xz_s (base) had invalid runs!

Run of 602.gcc_s (base) was not valid; status is CE

Run of 605.mcf_s (base) was not valid; status is RE

Run of 631.deepsjeng_s (base) was not valid; status is RE

Run of 657.xz_s (base) was not valid; status is RE

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	4	<u>197</u>	<u>9.02</u>											
602.gcc_s	1	0.00	0.00											
605.mcf_s	4	30.0	0.00											
620.omnetpp_s	4	<u>267</u>	<u>6.12</u>											
623.xalancbmk_s	4	<u>183</u>	<u>7.75</u>											
625.x264_s	4	<u>131</u>	<u>13.5</u>											
631.deepsjeng_s	4	0.00552	0.00											
641.leela_s	4	<u>348</u>	<u>4.91</u>											
648.exchange2_s	4	<u>128</u>	<u>23.1</u>											
657.xz_s	4	0.0102	0.00											

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Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Environment Variables Notes

Environment variables set by runcpu before the start of the run:

LD_LIBRARY_PATH = "/usr/lib64/:/usr/lib/:/lib64"

Platform Notes

Sysinfo program /home/tdx/speccpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on tdx-guest Wed Oct 23 13:43:57 2024

SUT (System Under Test) info as seen by some common utilities.

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- 1. uname -a
2. w

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Platform Notes (Continued)

```
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numactl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 255 (255.4-ubuntu8.1)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. sysctl
16. /sys/kernel/mm/transparent_hugepage
17. /sys/kernel/mm/transparent_hugepage/khugepaged
18. OS release
19. Disk information
20. /sys/devices/virtual/dmi/id
21. dmidecode
22. BIOS
-----

1. uname -a
Linux tdx-guest 6.8.0-35-generic #35-Ubuntu SMP PREEMPT_DYNAMIC Mon May 20 15:51:52 UTC 2024 x86_64 x86_64
x86_64 GNU/Linux
-----

2. w
13:43:57 up 2:19, 1 user, load average: 1.00, 1.00, 1.36
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU   WHAT
root      hvc0          -          11:24    2:09m  2.51s   ?     sh -c w 2>/dev/null
-----

3. Username
From environment variable $USER: root
-----

4. ulimit -a
time(seconds)      unlimited
file(blocks)        unlimited
data(kbytes)         unlimited
stack(kbytes)        8192
coredump(blocks)     0
memory(kbytes)       unlimited
locked memory(kbytes) 233908
process              7107
nofiles              1024
vmemory(kbytes)       unlimited
locks                unlimited
rtprio               0
-----

5. sysinfo process ancestry
/sbin/init
/bin/login -p --
-bash
runcpu --config=tdx.cfg --tune=base --size=ref all
runcpu --configfile tdx.cfg --tune base --size ref --noreportable --nopower --runmode speed --tune base
--size refspeed intspeak --nopreenv --note-preenv --logfile
```

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Software Availability:

Platform Notes (Continued)

```
$SPEC/tmp/CPU2017.010/temlogs/preenv.intspeed.010.3.log --lognam 010.3 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/tdx/speccpu2017
```

```
-----
6. /proc/cpuinfo
   model name      : 06/8f
   vendor_id       : GenuineIntel
   cpu family      : 6
   model           : 143
   stepping        : 8
   microcode       : 0x2b0005d1
   bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb bhi
   cpu cores       : 16
   siblings        : 16
   1 physical ids (chips)
   16 processors (hardware threads)
   physical id 0: core ids 0-15
   physical id 0: apicids 0-15
   Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
   virtualized systems. Use the above data carefully.
```

7. lscpu

```
From lscpu from util-linux 2.39.3:
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:         52 bits physical, 57 bits virtual
Byte Order:            Little Endian
CPU(s):                16
On-line CPU(s) list:   0-15
Vendor ID:             GenuineIntel
BIOS Vendor ID:       QEMU
Model name:            06/8f
BIOS Model name:       pc-q35-8.2 CPU @ 2.0GHz
BIOS CPU family:       1
CPU family:            6
Model:                143
Thread(s) per core:    1
Core(s) per socket:    16
Socket(s):             1
Stepping:              8
BogoMIPS:              4800.00
Flags:                 fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
                        clflush dts mmx fxsr sse sse2 ss ht tm syscall nx pdpe1gb rdtscp lm
                        constant_tsc bts rep_good nopl tsc_reliable nonstop_tsc cpuid
                        tsc_known_freq pni pclmulqdq dtes64 ds_cpl sse3 fma cx16 pdcm pcid
                        sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx
                        fl6c rdrand hypervisor lahf_lm abm 3dnowprefetch cpuid_fault ssbd
                        ibrs ibpb stibp ibrs_enhanced tdx_guest fsgsbase bmi1 avx2 smep bmi2
                        erms invpcid avx512f avx512dq rdseed adx smap avx512ifma clflushopt
                        clwb avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves
                        avx_vnni avx512_bf16 wbnoinvd avx512vbmi umip pku ospke avx512_vbmi2
                        gfni vaes vpclmulqdq avx512_vnni avx512_bitalg avx512_vpopcntdq la57
                        rdpid bus_lock_detect cldemote movdiri movdir64b fsrm md_clear
                        serialize tsxldtrk amx_bf16 avx512_fp16 amx_tile amx_int8 flush_l1d
                        arch_capabilities
Hypervisor vendor:     KVM
Virtualization type:    full
```

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Software Availability:

Platform Notes (Continued)

L1d cache: 512 KiB (16 instances)
L1i cache: 512 KiB (16 instances)
L2 cache: 64 MiB (16 instances)
L3 cache: 16 MiB (1 instance)
NUMA node(s): 1
NUMA node0 CPU(s): 0-15
Vulnerability Gather data sampling: Not affected
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf: Not affected
Vulnerability Mds: Not affected
Vulnerability Meltdown: Not affected
Vulnerability Mmio stale data: Not affected
Vulnerability Reg file data sampling: Not affected
Vulnerability Retbleed: Not affected
Vulnerability Spec rstack overflow: Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced / Automatic IBRS; IBPB conditional; RSB filling; PBSB-eIBRS SW sequence; BHI BHI_DIS_S
Vulnerability Srbds: Not affected
Vulnerability Tsx async abort: Not affected

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	32K	512K	8	Data	1	64	1	64
L1i	32K	512K	8	Instruction	1	64	1	64
L2	4M	64M	16	Unified	2	4096	1	64
L3	16M	16M	16	Unified	3	16384	1	64

8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.

available: 1 nodes (0)
node 0 cpus: 0-15
node 0 size: 1827 MB
node 0 free: 829 MB
node distances:
node 0: 10

9. /proc/meminfo

MemTotal: 1871284 kB

10. who -r

run-level 5 Oct 23 11:24

11. Systemd service manager version: systemd 255 (255.4-lubuntu8.1)

Default	Target	Status
graphical		running

12. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	ModemManager apparmor appport blk-availability cloud-config cloud-final cloud-init cloud-init-local console-setup cron dmesg e2scrub_reap finalrd getty@ grub-common grub-initrd-fallback keyboard-setup lvm2-monitor multipathd networkd-dispatcher open-iscsi open-vm-tools rsyslog secureboot-db setvtrgb snapd ssh sysstat systemd-networkd

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Software Availability:

Platform Notes (Continued)

enabled-runtime disabled
indirect masked

systemd-networkd-wait-online systemd-pstore systemd-resolved systemd-timesyncd
ua-reboot-cmds ubuntu-advantage udisks2 ufw unattended-upgrades vgauth
netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs
console-getty debug-shell iscsid nftables rsync systemd-boot-check-no-failures
systemd-confext systemd-network-generator systemd-networkd-wait-online@
systemd-PCRlock-file-system systemd-PCRlock-firmware-code systemd-PCRlock-firmware-config
systemd-PCRlock-machine-id systemd-PCRlock-make-policy
systemd-PCRlock-secureboot-authority systemd-PCRlock-secureboot-policy systemd-sysext
systemd-time-wait-sync
serial-getty@ systemd-sysupdate systemd-sysupdate-reboot uidd
cryptdisks cryptdisks-early hwclock multipath-tools-boot pollinate screen-cleanup sudo
x11-common

13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/vmlinuz-6.8.0-35-generic
root=UUID=41106c9c-97fc-4396-8622-4f692c8e5bb1
ro
console=tty1
console=ttyS0

14. cpupower frequency-info
analyzing CPU 0:
Unable to determine current policy
boost state support:
Supported: no
Active: no

15. sysctl

kernel.numa_balancing	0
kernel.randomize_va_space	2
vm.compaction_proactiveness	20
vm.dirty_background_bytes	0
vm.dirty_background_ratio	10
vm.dirty_bytes	0
vm.dirty_expire_centisecs	3000
vm.dirty_ratio	20
vm.dirty_writeback_centisecs	500
vm.dirtytime_expire_seconds	43200
vm.extfrag_threshold	500
vm.min_unmapped_ratio	1
vm.nr_hugepages	0
vm.nr_hugepages_mempolicy	0
vm.nr_overcommit_hugepages	0
vm.swappiness	60
vm.watermark_boost_factor	15000
vm.watermark_scale_factor	10
vm.zone_reclaim_mode	0

16. /sys/kernel/mm/transparent_hugepage
defrag always defer defer+madvice [madvice] never
enabled always [madvice] never
hpage_pmd_size 2097152
shmem_enabled always within_size advise [never] deny force

17. /sys/kernel/mm/transparent_hugepage/khugepaged

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Platform Notes (Continued)

```
alloc_sleep_millisecs    60000
defrag                   1
max_ptes_none            511
max_ptes_shared          256
max_ptes_swap            64
pages_to_scan            4096
scan_sleep_millisecs     10000
```

18. OS release

```
From /etc/*-release /etc/*-version
os-release Ubuntu 24.04 LTS
```

19. Disk information

```
SPEC is set to: /home/tdx/speccpu2017
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/vda1       ext4   51G   15G   37G   29% /
```

20. /sys/devices/virtual/dmi/id

```
Vendor:      QEMU
Product:     Standard PC (Q35 + ICH9, 2009)
```

21. dmidecode

Additional information from dmidecode 3.5 follows. WARNING: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

```
Memory:
  1x QEMU Not Specified 2 GB
```

22. BIOS

(This section combines info from /sys/devices and dmidecode.)

```
BIOS Vendor:    Ubuntu distribution of EDK II
BIOS Version:   2024-02-3+tdx1.0
BIOS Date:      07/03/2024
BIOS Revision:  0.0
```

Compiler Version Notes

```
====
C      | 600.perlbench_s(base) 605.mcf_s(base) 625.x264_s(base) 657.xz_s(base)
=====
```

```
gcc (Ubuntu 13.2.0-23ubuntu4) 13.2.0
```

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```
====
C++    | 620.omnetpp_s(base) 623.xalancbmk_s(base) 631.deepsjeng_s(base) 641.leela_s(base)
=====
```

```
g++ (Ubuntu 13.2.0-23ubuntu4) 13.2.0
```

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Compiler Version Notes (Continued)

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Fortran | 648.exchange2_s(base)

GNU Fortran (Ubuntu 13.2.0-23ubuntu4) 13.2.0

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Base Compiler Invocation

C benchmarks (except as noted below):

gcc

C++ benchmarks:

g++

Fortran benchmarks:

gfortran

Base Portability Flags

600.perlbench_s: -DSPEC_LINUX_X64 -DSPEC_LP64

605.mcf_s: -DSPEC_LP64

620.omnetpp_s: -DSPEC_LP64

623.xalancbmk_s: -DSPEC_LINUX -DSPEC_LP64

625.x264_s: -DSPEC_LP64

631.deepsjeng_s: -DSPEC_LP64

641.leela_s: -DSPEC_LP64

648.exchange2_s: -DSPEC_LP64

657.xz_s: -DSPEC_LP64

Base Optimization Flags

C benchmarks:

600.perlbench_s: -m64 -std=c99 -g -O3 -march=native -fno-strict-aliasing

-fno-unsafe-math-optimizations -fno-finite-math-only

-fgnu89-inline -fopenmp -DSPEC_OPENMP

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Base Optimization Flags (Continued)

605.mcf_s: Same as 600.perlbench_s

625.x264_s: Same as 600.perlbench_s

657.xz_s: Same as 600.perlbench_s

C++ benchmarks:

-m64 -std=c++03 -g -O3 -march=native -fopenmp -DSPEC_OPENMP

Fortran benchmarks:

-m64 -g -O3 -march=native -DSPEC_OPENMP -fopenmp

Base Other Flags

C benchmarks (except as noted below):

-fcommon

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For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

Tested with SPEC CPU®2017 v1.1.9 on 2024-10-23 13:43:56+0000.

Report generated on 2024-10-23 14:09:07 by CPU2017 PDF formatter v6716.