

SPEC CPU®2017 Integer Rate Result

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My Corporation

SPECrate®2017_int_base = 6.67

SPECrate®2017_int_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)

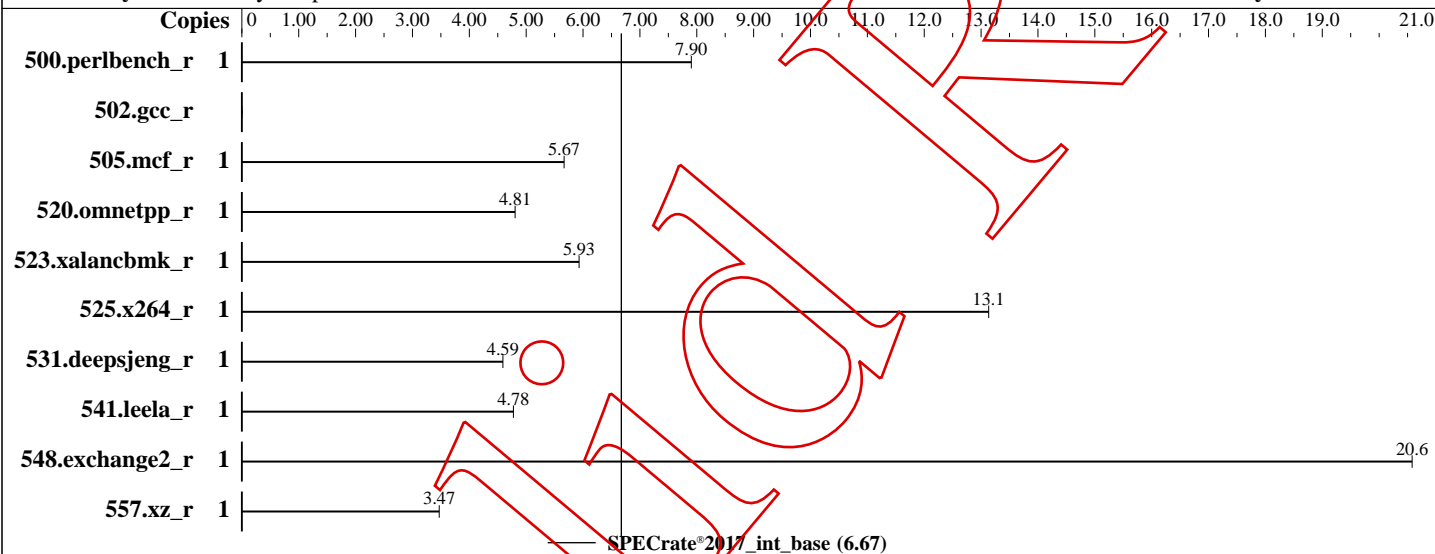
Test Sponsor: My Corporation

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:
Firmware: No
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
505.mcf_r (base) did not have enough runs!
541.leela_r (base) did not have enough runs!
531.deepsjeng_r (base) did not have enough runs!
525.x264_r (base) did not have enough runs!
500.perlbench_r (base) did not have enough runs!
557.xz_r (base) did not have enough runs!
523.xalancbmk_r (base) did not have enough runs!
520.omnetpp_r (base) did not have enough runs!
502.gcc_r (base) did not have enough runs!
548.exchange2_r (base) did not have enough runs!

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Errors (Continued)

502.gcc_r (base) had invalid runs!

Run of 502.gcc_r (base) was not valid; status is CE

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	1	201	7.90											
502.gcc_r	1	0.00	0.00											
505.mcf_r	1	285	5.67											
520.omnetpp_r	1	273	4.81											
523.xalancbmk_r	1	178	5.93											
525.x264_r	1	133	13.1											
531.deepsjeng_r	1	250	4.59											
541.leela_r	1	347	4.78											
548.exchange2_r	1	127	20.6											
557.xz_r	1	311	3.47											

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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 13:05:26 2024

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

Table of contents

1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numactl --hardware
9. /proc/meminfo

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Platform Notes (Continued)

```
10. who -r
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.1)
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
 13:05:26 up  1:40,  1 user,  load average: 2.86, 3.96, 5.02
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU   WHAT
root      hvc0     -               11:24    1430m  2.50s  ?      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) 23908
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 rate --tune base
--size refrate intrate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.010/templots/preenv.intrate.010.2.log --lognum 010.2 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/tdx/speccpu2017
-----

6. /proc/cpuinfo
model name          : 06/8f
```

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Platform Notes (Continued)

vendor_id : GenuineIntel
cpu family : 6
model : 143
stepping : 8
microcode : 0x2b0005d1
bugs : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbsb 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 ssse3 fma cx16 pdcm pcid sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand hypervisor lahf_lm abm 3dnowprefetch cpuid_fault ssbd ibrs ibpb stibp ibrs_enhanced tdx_guest fgsgbase 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
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

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Software Availability:

Platform Notes (Continued)

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; PBRSE-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: 1202 MB
node distances:
node 0
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 (255.4-1ubuntu8.1)

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 systemd-networkd-wait-online systemd-pstore systemd-resolved systemd-timesyncd ua-reboot-cmds ubuntu-advantage udisks2 ufw unattended-upgrades vgauth
enabled-runtime	netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs
disabled	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

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Platform Notes (Continued)

indirect
masked

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-4396-8622-4f692c8c5bb1
ro
console=tty1
console=ttyS0

14. cpupower frequency-info
analyzing CPU 2:
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+madvise [madvise] never
enabled always [madvise] never
hpage_pmd_size 2097152
shmem_enabled always within_size advise [never] deny force

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

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Platform Notes (Continued)

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	12G	39G	24%	/

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 | 500.perlbench_r(base) 505.mcf_r(base) 525.x264_r(base) 557.xz_r(base)

gcc (Ubuntu 13.2.0-23ubuntu4) 13.2.0

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C++ | 520.omnetpp_r(base) 523.xalancbmk_r(base) 531.deepsjeng_r(base) 541.leela_r(base)

g++ (Ubuntu 13.2.0-23ubuntu4) 13.2.0

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Fortran | 548.exchange2_r(base)

GNU Fortran (Ubuntu 13.2.0-23ubuntu4) 13.2.0

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Compiler Version Notes (Continued)

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Base Compiler Invocation

C benchmarks (except as noted below):

gcc

C++ benchmarks:

g++

Fortran benchmarks:

gfortran

Base Portability Flags

500.perlbench_r: -DSPEC_LINUX_X64 -DSPEC_LP64

505.mcf_r: -DSPEC_LP64

520.omnetpp_r: -DSPEC_LP64

523.xalancbmk_r: -DSPEC_LINUX -DSPEC_LP64

525.x264_r: -DSPEC_LP64

531.deepsjeng_r: -DSPEC_LP64

541.leela_r: -DSPEC_LP64

548.exchange2_r: -DSPEC_LP64

557.xz_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:

500.perlbench_r: -m64 -std=c99 -g -O3 -march=native -fno-strict-aliasing
-fno-unsafe-math-optimizations -fno-finite-math-only
-fgnu89-inline

505.mcf_r: Same as 500.perlbench_r

525.x264_r: Same as 500.perlbench_r

557.xz_r: Same as 500.perlbench_r

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Base Optimization Flags (Continued)

C++ benchmarks:

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

Fortran benchmarks:

-m64 -g -O3 -march=native

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 13:05:25+0000.

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