

SPEC® CPU2017 Integer Speed Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

My Corporation

(Test Sponsor: Intel Corporation)

SPECspeed2017_int_base = 0.5792

SPECspeed2017_int_peak = Not Run

CPU2017 License: 13

Test Sponsor: Intel Corporation

Tested by: Intel Corporation

Test Date: May-2020

Hardware Availability:

Software Availability: Sep-2017

Threads	0	0.0300	0.0700	0.110	0.140	0.170	0.200	0.230	0.260	0.290	0.320	0.350	0.380	0.410	0.440	0.470	0.500	0.530	0.580
600.perlbench_s																			
602.gcc_s																			
605.mcf_s	1																		0.579
620.omnetpp_s																			
623.xalancbmk_s																			
625.x264_s																			
631.deepsjeng_s																			
641.leela_s																			
648.exchange2_s																			
657.xz_s																			
— SPECspeed2017_int_base (0.5792)																			

Hardware

CPU Name: Genuine Intel 0000
Max MHz.:
Nominal:
Enabled: cores, 1 chip, threads/core
Orderable:
Cache L1:
L2:
L3:
Other:
Memory: 15.428 GB fixme: If using DDR3, format is:
'N GB (M x N GB nRxn PCn-nnnnnR-n, ECC)'
Storage: 391 GB add more disk info here
Other:

Software

OS: Fedora release 32 (Thirty Two)
5.7.0-0.rc6.1.1.cet.fc32.x86_64
Compiler: C/C++: Version 8.1.0 of GNU C/C++
Compiler for Linux;
Fortran: Version 8.1.0 of GNU Fortran
Compiler for Linux
Parallel: No
Firmware: --
File System: ext4
System State: Run level 3 (add definition here)
Base Pointers: 64-bit
Peak Pointers: Not Applicable
Other: --

Errors

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

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Errors (Continued)

Unknown flags were used! See

<https://www.spec.org/cpu2017/Docs/runcpu.html#flagsurl>
for information about how to get rid of this error.

Results Table

Benchmark	Base								Peak							
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s																
602.gcc_s																
605.mcf_s	1	8151	0.579													
620.omnetpp_s																
623.xalancbmk_s																
625.x264_s																
631.deepsjeng_s																
641.leela_s																
648.exchange2_s																
657.xz_s																

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

General Notes

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

KMP_AFFINITY = "granularity=fine,compact"

LD_LIBRARY_PATH = "/home/ucsd/SpectreSandboxing/spec2017/lib/ia32:/home/ucsd/SpectreSandboxing/spec2017/lib/intel64"

OMP_STACKSIZE = "192M"

Binaries compiled on a system with Intel(R) Core(TM) i9-7900X CPU + 32GB RAM
memory using Redhat Enterprise Linux 7.5
Transparent Huge Pages enabled by default

Platform Notes

Sysinfo program /home/ucsd/SpectreSandboxing/spec2017/bin/sysinfo
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f
running on tigerlake1-ravi Sat May 30 09:32:59 2020

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Platform Notes (Continued)

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

For more information on this section, see

<https://www.spec.org/cpu2017/Docs/config.html#sysinfo>

From /proc/cpuinfo

model name : Genuine Intel(R) CPU 0000 @ 2.30GHz

1 "physical id"s (chips)

8 "processors"

cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

cpu cores : 4

siblings : 8

physical 0: cores 0 1 2 3

From 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: 140

Model name: Genuine Intel(R) CPU 0000 @ 2.30GHz

Stepping: 0

CPU MHz: 1770.176

CPU max MHz: 4200.0000

CPU min MHz: 400.0000

BogoMIPS: 4608.00

Virtualization: VT-x

L1d cache: 192 KiB

L1i cache: 128 KiB

L2 cache: 5 MiB

L3 cache: 12 MiB

NUMA node0 CPU(s): 0-7

Vulnerability Itlb multihit: KVM: Mitigation: Split huge pages

Vulnerability L1tf: Not affected

Vulnerability Mds: Vulnerable: Clear CPU buffers attempted, no

microcode; SMT vulnerable

Vulnerability Meltdown: Not affected

Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp

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Platform Notes (Continued)

Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced IBRS, IBPB conditional, RSB filling
Vulnerability Tsx async abort: Not affected
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 avx512f avx512dq rdseed adx smap avx512ifma clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves dtherm ida arat pln pts hwp hwp_notify hwp_act_window hwp_epp hwp_pkg_req avx512vbmi umip pku ospke avx512_vbmi2 shstk gfni vaes vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpopcntdq rdpid movdiri movdir64b fsrm avx512_vp2intersect ibt flush_lld arch_capabilities

```
/proc/cpuinfo cache data
cache size : 12288 KB
```

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a physical chip.

```
From /proc/meminfo
MemTotal:      16177588 kB
HugePages_Total: 0
Hugepagesize:   2048 kB
```

```
From /etc/*release* /etc/*version*
fedora-release: Fedora release 32 (Thirty Two)
os-release:
NAME=Fedora
VERSION="32 (Workstation Edition)"
ID=fedora
VERSION_ID=32
VERSION_CODENAME=""
PLATFORM_ID="platform:f32"
PRETTY_NAME="Fedora 32 (Workstation Edition)"
ANSI_COLOR="0;34"
redhat-release: Fedora release 32 (Thirty Two)
system-release: Fedora release 32 (Thirty Two)
system-release-cpe: cpe:/o:fedoraproject:fedora:32
```

```
uname -a:
Linux tigerlake1-ravi 5.7.0-0.rc6.1.1.cet.fc32.x86_64 #1 SMP Mon May 18 17:21:34 PDT
```

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Platform Notes (Continued)

2020 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 May 28 23:18

SPEC is set to: /home/ucsd/SpectreSandboxing/spec2017

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/mapper/fedora_localhost--live-home	ext4	391G	128G	243G	35%	/home

Additional information from dmidecode 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.

(End of data from sysinfo program)

Compiler Version Notes

=====
CC 605.mcf_s(base)
=====

clang version 10.0.0 (<https://github.com/llvm/llvm-project>
d32170dbd5b0d54436537b6b75beaf44324e0c28)

Target: wasm32-unknown-wasi

Thread model: posix

InstalledDir: /opt/wasi-sdk/bin
=====

Base Unknown Flags

605.mcf_s: "/opt/wasi-sdk/bin/clang --sysroot
/opt/wasi-sdk/share/wasi-sysroot -Wl,--export-all
-I/opt/wasi-sdk/lib/clang/10.0.0/include/ARRAY(0x82af360)
"/opt/wasi-sdk/bin/clang --sysroot
/opt/wasi-sdk/share/wasi-sysroot -Wl,--export-all
-I/opt/wasi-sdk/lib/clang/10.0.0/include/ARRAY(0x82abb18)
"-O2ARRAY(0x82ca190)

Base Runtime Environment

C benchmarks:

605.mcf_s: No flags used

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Base Compiler Invocation

C benchmarks:

605.mcf_s: No flags used

Base Portability Flags

605.mcf_s: -DSPEC_LP64

Base Optimization Flags

C benchmarks:

605.mcf_s: -Wl,-z,muldefs -fno-strict-aliasing -DSPEC_SUPPRESS_OPENMP

Base Other Flags

C benchmarks:

605.mcf_s: No flags used

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

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