#### SPEC® CPU2017 Integer Speed Result Copyright 2017-2020 Standard Performance Evaluation Corporation My Corporation SPECspeed2017\_int\_base = (Test Sponsor: Intel Corporation) SPECspeed2017 int **Mot Run** Test Date: CPU2017 License: 13 May-2020 Hardware Availability: **Test Sponsor:** Intel Corporation Tested by: Software Availability: Sep-2017 Intel Corporation Threads 0 4.00 600.perlbench\_s 602.gcc\_s 4.10 605.mcf\_s 1 620.omnetpp\_s 623.xalancbmk\_s 625.x264 s 631.deepsjeng\_s 641.leela s 648.exchange2\_s 657.xz\_s SPECspeed 017\_int\_base (4.10) Hardware Software CPU Name: Genuine Intel 0000 OS: Fedora release 32 (Thirty Two) Max MHz.: 5.7.0-0.rc6.1.1.cet.fc32.x86\_64 Nominal: Compiler: C/C++: Version 8.1.0 of GNU C/C++ Enabled: cores, 1 chip, threads/core Compiler for Linux; Orderable: Fortran: Version 8.1.0 of GNU Fortran Cache L1: Compiler for Linux Parallel: L2: No L3: Firmware: File System: Other: ext4 15.428 GB fixme: If using DDR3, format is: System State: Run level 3 (add definition here) Memory: 'N GB (M x N GB nRxn PCn-nnnnnR-n, ECC)' Base Pointers: 64-bit Storage: B91 GB, add more disk info here Peak Pointers: Not Applicable Other: Other:

### **Errors**

'reportable' flag not set during run 602.gcc s (base) did not have enough runs! 600.perlberch\_s (base) did not have enough runs! 605.mcf\_s (base) did not have enough runs! 620.omnetpy's (base) did not have enough runs! 648.exchange2\_s (base) did not have enough runs! 631.deepsjeng\_s (base) did not have enough runs! 657.xz\_s (base) did not have enough runs! 623.xalancbmk\_s (base) did not have enough runs! 625.x264\_s (base) did not have enough runs!

641.leela s (base) did not have enough runs!

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SPECspeed2017\_int\_peak Not Run

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**Tested by:** Intel Corporation

Test Date: May-2020

<u>`.10</u>

Hardware Availability:

Software Availability: Sep-2017

### **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

						//	_							
	Base							1	Peak					
Benchmark	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s								$\mathcal{N}$						
602.gcc_s								//						
605.mcf_s	1	<u>1153</u>	4.10				$\overline{}$							
620.omnetpp_s					•									
623.xalancbmk_s														
625.x264_s						)/								
631.deepsjeng_s						V)								
641.leela_s														
648.exchange2_s					776									
657.xz_s		<i>^</i>		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\										

SPECspeed2017\_int\_base =

4.10

SPECspeed2017\_int\_peak =

Not Run

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 = //ome/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 21:35:10 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(m)ght not/be reliable/ Use with caution.)

> 32-b1t, 64-bit Little Endian

x86\_

0-72

4

1

6

140

cpu cores : 4 siblings : 8

physical 0: cores 0

#### From lscpu:

```
Architecture:
CPU op-mode(s):
```

Byte Order: Address sizes:

CPU(s):

On-line CPU(s) list: Thread(s) per core: Core(s) per socket:

Socket(s): NUMA node(s):

Vendor In:

CPU family:

Model:

Model name:

Stepping:

PU MHz: CPU max MHz: CPU min MHz:

BogoMIRS: Virtualization: L1d cache:

Mi cache: L2 cache: L3/cache:

NUMA node0 CPU(s):

Vulnerability Mds:

Vulnerability Itlb multihit: Vulnerability L1tf:

microcode; SMT vulnerable

Vulnerability Meltdown:

prctl and seccomp

400.0000

4200.0000 4608.00

1965.207

GenuineIntel

VT-x192 KiB 128 KiB 5 MiB

12 MiB 0 - 7KVM: Mitigation: Split huge pages

39 bits physical, 48 bits virtual

Genuine Intel(R) CPU 0000 @ 2.30GHz

Not affected Vulnerable: Clear CPU buffers attempted, no

Not affected Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via

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Software Availability: Sep-2017

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#### Platform Notes (Continued)

Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and \_\_user

pointer sanitization

Mitigation; Enhanced IBRS/ IBPB conditional, RSB Vulnerability Spectre v2:

filling

Not affected Vulnerability Tsx async abort:

Flags:

fpu wme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts agpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpelgb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq phi pc/mulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma x16 xtp dcm pcid se4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16d rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb invpcid\_single ssbd ibrs ippb stibe ibrs\_shanced tpr\_shadow vnmi flexpriority ept vpid ept\_ad fsgsbase tsc\_ddjust bmil avx2 smep bmi2 erms invpcid avx512f avx512dq rdseed adx map avx512ifma alflushopt clwb intel\_pt avx512cd sha\_ni avx512bw avx512vl xsaveopt xsavec xgetbvl 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

/proc/cpuinfo cache data cache size : 12288 KB

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

movdiri movdir64b fsrm avx512\_vp2infersect ibt flush\_11d arch\_capabilities

From /proc/meminfo

MemTotal: 16177588 kB HugePages\_Total: Hugepagesize: 2048 kB

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 tigerlakel-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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**Tested by:** Intel Corporation

Test Date: May-2020

Hardware Availability:

Used Avail Use Mounted on

**Software Availability:** Sep-2017

#### 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/SpectreSandroxing/spec2017
Filesystem Type Size

/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

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CC 605.mcf s(base)

------

clang version 10.0.0 (https://github.com/llvm/llvm-project

d32170dbd5b0d5443<mark>653</mark>7b6b75beaf44324e0c28)

Target: wasm32-unknown wasi

Thread model: posix

InstalledDir: opt/wasi-adk/bin

------

### **Base Unknown Flags**

605.mcf/s:"/opt/wasi\_sdk/bin/clang --sysroot

/opt/wasi sdk/shar/wasi-sysroot -Wl,--export-all

I/opt/wasi~sdk/41b/clang/10.0.0/include/ARRAY(0x8709b10)

"/opt/wasi-sdk/b/n/clang --sysroot

/opt/wasi-sdk/share/wasi-sysroot -Wl,--export-all

-I/opt/wasi-sdk/lib/clang/10.0.0/include/ARRAY(0x871e0b8)

"-02ARRAX(0x872bf38)

#### **Base Runtime Environment**

C benchmarks:

 $605.mcf\_s$ : No flags used

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Hardware Availability:

Software Availability: Sep-2017

### 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 -fro-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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