SPEC® CPU2017 Floating Point Speed Result

My Corporation

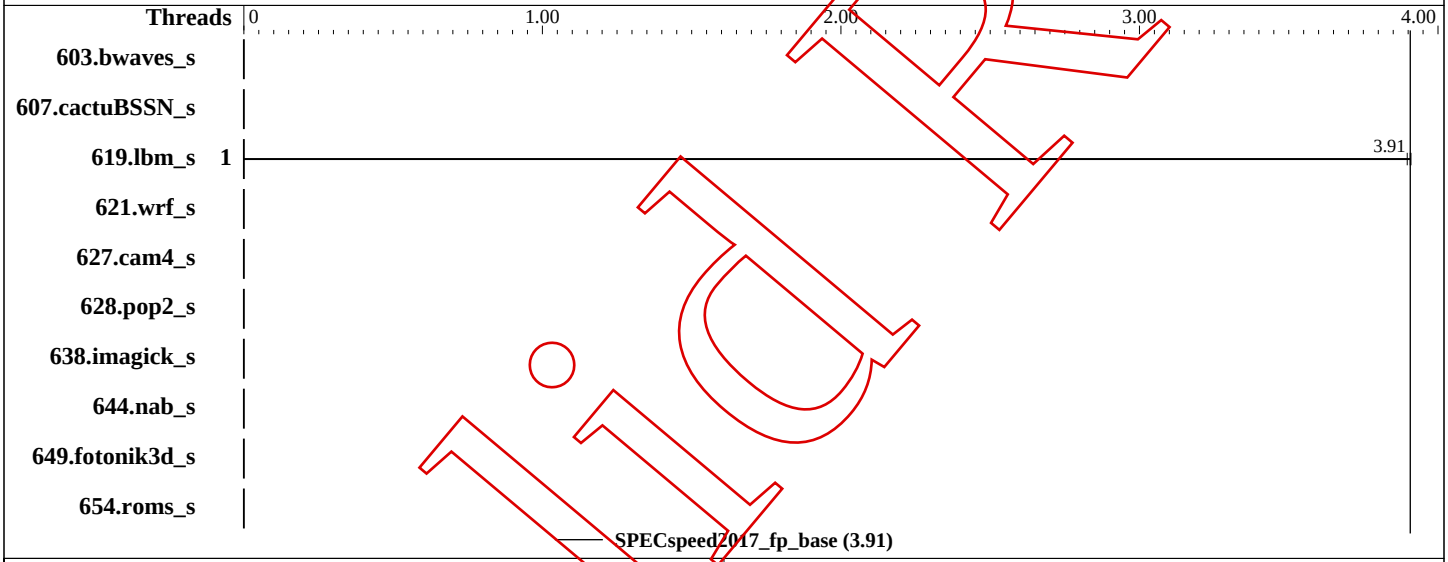
(Test Sponsor: Intel Corporation)

SPECspeed2017_fp_base = 3.91

SPECspeed2017_fp_peak = Not Run

CPU2017 License: 13
Test Sponsor: Intel Corporation
Tested by: Intel Corporation

Test Date: May-2020
Hardware Availability:
Software Availability: Sep-2017



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: 64-bit
Other: --

Errors

'reportable' flag not set during run
603.bwaves_s (base) did not have enough runs!
628.pop2_s (base) did not have enough runs!
627.cam4_s (base) did not have enough runs!
654.roms_s (base) did not have enough runs!
621.wrf_s (base) did not have enough runs!
649.fotonik3d_s (base) did not have enough runs!
607.cactuBSSN_s (base) did not have enough runs!
638.imagick_s (base) did not have enough runs!
644.nab_s (base) did not have enough runs!
Unknown flags were used! See

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Errors (Continued)

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
603.bwaves_s														
607.cactuBSSN_s														
619.lbm_s	1	1340	3.91	1344	3.90	**1341**	**3.91**							
621.wrf_s														
627.cam4_s														
628.pop2_s														
638.imagick_s														
644.nab_s														
649.fotonik3d_s														
654.roms_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 23 19:05:12 2020

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

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Platform Notes (Continued)

```
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:                         2699.977
     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
     Vulnerability Spectre v1:        Mitigation; usercopy/swapgs barriers and __user
```

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Platform Notes (Continued)

```
      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_l1d 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
     2020 x86_64 x86_64 x86_64 GNU/Linux
```

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Platform Notes (Continued)

```
 run-level 3 May 21 18:49

 SPEC is set to: /home/ucsd/SpectreSandboxing/spec2017
    Filesystem                                Type  Size  Used Avail Use% Mounted on
    /dev/mapper/fedora_localhost--live-home ext4  391G  125G  247G  34% /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  619.lbm_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

619.lbm_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(0x7c7e2c8)
"/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(0x7c8cdf8)
"-O2ARRAY(0x7ca7d60)

Base Runtime Environment

C benchmarks:

619.lbm_s: No flags used

Base Compiler Invocation

C benchmarks:

619.lbm_s: `No flags used`

Base Portability Flags

619.lbm_s: `-DSPEC_LP64`

Base Optimization Flags

C benchmarks:

619.lbm_s: `-fno-strict-aliasing -DSPEC_SUPPRESS_OPENMP`

Base Other Flags

C benchmarks:

619.lbm_s: `No flags used`

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

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