SPEC® CPU2017 Integer Speed Result

My Corporation
(Test Sponsor: Intel Corporation)

SPECspeed2017_int_base =   2.87

SPECspeed2017_int_peak = Not Run

CPU2017 License: 13		**Test Date:**	May-2020
Test Sponsor:	Intel Corporation	**Hardware Availability:**	
Tested by:	Intel Corporation	**Software Availability:**	Sep-2017

Threads

Benchmark	
600.perlbench_s	
602.gcc_s	
605.mcf_s	
620.omnetpp_s	
623.xalancbmk_s	
625.x264_s	
631.deepsjeng_s	
641.leela_s	1 — 2.87
648.exchange2_s	
657.xz_s	

SPECspeed2017_int_base (2.87)

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
631.deepsjeng_s (base) did not have enough runs!
602.gcc_s (base) did not have enough runs!
620.omnetpp_s (base) did not have enough runs!
625.x264_s (base) did not have enough runs!
623.xalancbmk_s (base) did not have enough runs!
600.perlbench_s (base) did not have enough runs!
657.xz_s (base) did not have enough runs!
641.leela_s (base) did not have enough runs!
605.mcf_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
600.perlbench_s														
602.gcc_s														
605.mcf_s														
620.omnetpp_s														
623.xalancbmk_s														
625.x264_s														
631.deepsjeng_s														
641.leela_s	1	**594**	**2.87**											
648.exchange2_s														
657.xz_s														

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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 = "/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 23:14:27 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:                      2700.000
      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_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
```

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Platform Notes (Continued)

```
    2020 x86_64 x86_64 x86_64 GNU/Linux

 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

```
==============================================================================
  CXXC 641.leela_s(base)
------------------------------------------------------------------------------
g++ (GCC) 10.1.1 20200507 (Red Hat 10.1.1-1)
Copyright (C) 2020 Free Software Foundation, Inc.
This is free software; see the source for copying conditions.  There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
------------------------------------------------------------------------------
```

Base Unknown Flags

```
641.leela_s:"-I/include -I/usr/includeARRAY(0x7566830)
"-I/include -I/usr/includeARRAY(0x75543d8)
```

Base Runtime Environment

C++ benchmarks:

```
 641.leela_s:No flags used
```

Base Compiler Invocation

C++ benchmarks:

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Base Compiler Invocation (Continued)

641.leela_s: `g++`

Base Portability Flags

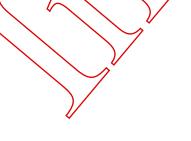641.leela_s: `-DSPEC_LP64`

Base Optimization Flags

C++ benchmarks:

641.leela_s: `-m64 -std=c++03 -Wl,-z,muldefs -O2 -fno-strict-aliasing`

Base Other Flags

C++ benchmarks:

641.leela_s: `No flags used`

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

Tested with SPEC CPU2017 v1.0.2 on 2020-05-23 23:14:27-0700.
Report generated on 2020-05-23 23:24:25 by CPU2017 PDF formatter v5748.