SPEC CPU®2017 Integer Speed Result

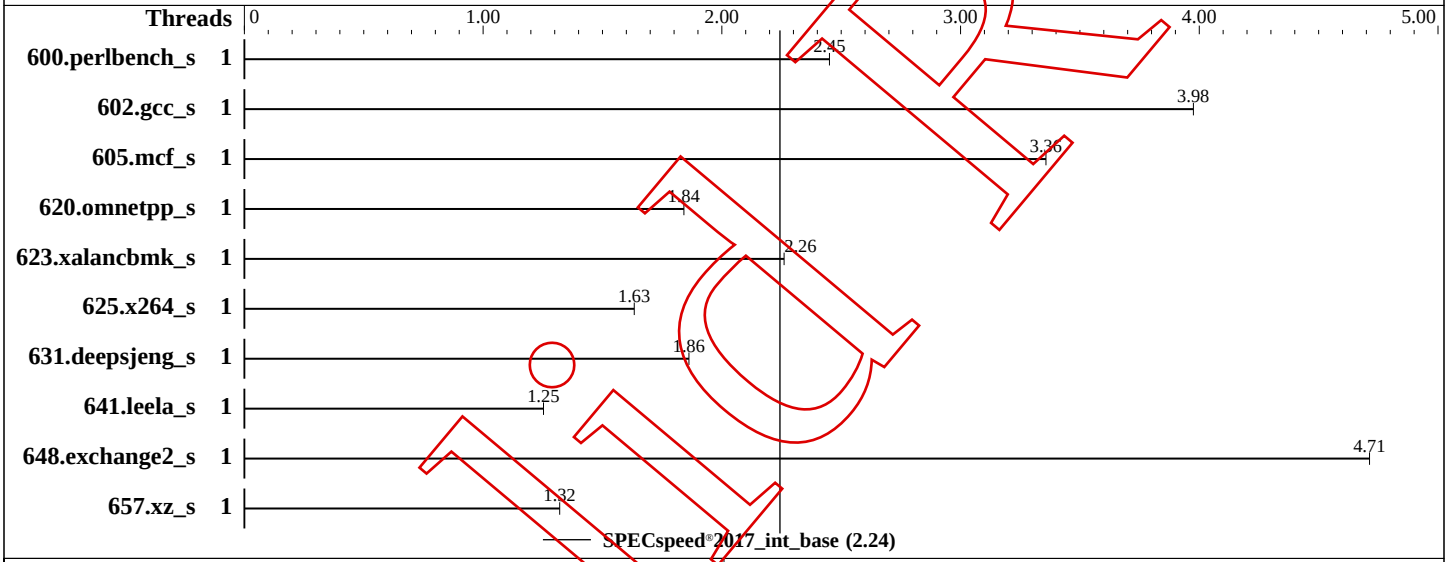
My Corporation

SPECspeed®2017_int_base = 2.24

SPECspeed®2017_int_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)
Test Sponsor: My Corporation
Tested by: My Corporation

Test Date: Oct-2020
Hardware Availability:
Software Availability:



Hardware

CPU Name: Intel Xeon Bronze 3106
Max MHz:
Nominal:
Enabled: cores, 1 chip, threads/core
Orderable:
Cache L1:
L2:
L3:
Other:
Memory: 78.334 GB fixme: If using DDR4, the format is: 'N GB (N x N GB nRxn PC4-nnnnX-X)'
Storage: 6.9 TB add more disk info here
Other:

Software

OS: Ubuntu 18.04.3 LTS
4.15.0-70-generic
Compiler: C/C++/Fortran: Version 7.2.1 of GCC, the GNU Compiler Collection
Parallel: Yes
Firmware:
File System: nfs
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
623.xalancbmk_s (base) did not have enough runs!
648.exchange2_s (base) did not have enough runs!
641.leela_s (base) did not have enough runs!
657.xz_s (base) did not have enough runs!
620.omnetpp_s (base) did not have enough runs!
602.gcc_s (base) did not have enough runs!
625.x264_s (base) did not have enough runs!
600.perlbench_s (base) did not have enough runs!
605.mcf_s (base) did not have enough runs!
631.deepsjeng_s (base) did not have enough runs!

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Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	1	**724**	**2.45**											
602.gcc_s	1	**1002**	**3.98**											
605.mcf_s	1	**1406**	**3.36**											
620.omnetpp_s	1	**886**	**1.84**											
623.xalancbmk_s	1	**627**	**2.26**											
625.x264_s	1	**1080**	**1.63**											
631.deepsjeng_s	1	**770**	**1.86**											
641.leela_s	1	**1362**	**1.25**											
648.exchange2_s	1	**624**	**4.71**											
657.xz_s	1	**4681**	**1.32**											

SPECspeed®2017_int_base = 2.24

SPECspeed®2017_int_peak = Not Run

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 /u/home/schmidtf/spec/bin/sysinfo
 Rev: r6365 of 2019-08-21 295195f888a3d7edb1e6e46a485a0011
 running on sksmall Tue Oct 13 13:37:17 2020

 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 : Intel(R) Xeon(R) Bronze 3106 CPU @ 1.70GHz
       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 : 8
       siblings  : 8
       physical 0: cores 0 1 2 3 4 5 6 7

 From lscpu:
      Architecture:        x86_64
```

(Continued on next page)

Platform Notes (Continued)

```
      CPU op-mode(s):      32-bit, 64-bit
      Byte Order:          Little Endian
      CPU(s):              8
      On-line CPU(s) list: 0-7
      Thread(s) per core:  1
      Core(s) per socket:  8
      Socket(s):           1
      NUMA node(s):        1
      Vendor ID:           GenuineIntel
      CPU family:          6
      Model:               85
      Model name:          Intel(R) Xeon(R) Bronze 3106 CPU @ 1.70GHz
      Stepping:            4
      CPU MHz:             1700.001
      CPU max MHz:         1700.0000
      CPU min MHz:         800.0000
      BogoMIPS:            3400.00
      Virtualization:      VT-x
      L1d cache:           32K
      L1i cache:           32K
      L2 cache:            1024K
      L3 cache:            11264K
      NUMA node0 CPU(s):   0-7
      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 pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16
      xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave
      avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cdp_l3
      invpcid_single pti intel_ppin ssbd mba ibrs ibpb stibp tpr_shadow vnmi flexpriority
      ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx rdt_a
      avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd avx512bw avx512vl
      xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
      dtherm arat pln pts hwp hwp_act_window hwp_pkg_req pku ospke md_clear flush_l1d

  /proc/cpuinfo cache data
     cache size : 11264 KB

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

  From /proc/meminfo
     MemTotal:       82139464 kB
     HugePages_Total:       0
     Hugepagesize:       2048 kB

  /usr/bin/lsb_release -d
```

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Platform Notes (Continued)

```
   Ubuntu 18.04.3 LTS

From /etc/*release* /etc/*version*
   debian_version: buster/sid
   os-release:
      NAME="Ubuntu"
      VERSION="18.04.3 LTS (Bionic Beaver)"
      ID=ubuntu
      ID_LIKE=debian
      PRETTY_NAME="Ubuntu 18.04.3 LTS"
      VERSION_ID="18.04"
      HOME_URL="https://www.ubuntu.com/"
      SUPPORT_URL="https://help.ubuntu.com/"

uname -a:
   Linux sksmall 4.15.0-70-generic #79-Ubuntu SMP Tue Nov 12 10:36:11 UTC 2019 x86_64
   x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

itlb_multihit:                          KVM: Mitigation: Split huge pages
CVE-2018-3620 (L1 Terminal Fault):      Mitigation: PTE Inversion; VMX: conditional
                                        cache flushes, SMT disabled
Microarchitectural Data Sampling:       Mitigation: Clear CPU buffers; SMT disabled
CVE-2017-5754 (Meltdown):               Mitigation: PTI
CVE-2018-3639 (Speculative Store Bypass): Mitigation: Speculative Store Bypass disabled
                                        via prctl and seccomp
CVE-2017-5753 (Spectre variant 1):      Mitigation: usercopy/swapgs barriers and __user
                                        pointer sanitization
CVE-2017-5715 (Spectre variant 2):      Mitigation: Full generic retpoline, IBPB:
                                        conditional, IBRS_FW, STIBP: disabled, RSB
                                        filling
tsx_async_abort:                        Mitigation: Clear CPU buffers; SMT disabled

run-level 5 Nov 28 09:46

SPEC is set to: /u/home/schmidtf/spec
   Filesystem                                     Type  Size  Used Avail Use% Mounted
   on
   nasil10.informatik.tu-muenchen.de:/srv/il10/home nfs   6.9T  4.2T  2.4T  64% /u/home

From /sys/devices/virtual/dmi/id
    BIOS:    HPE U32 11/13/2019
    Vendor:  HPE
    Product: ProLiant DL360 Gen10
    Product Family: ProLiant
```

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Platform Notes (Continued)

```
 Cannot run dmidecode; consider saying (as root)
    chmod +s /usr/sbin/dmidecode

 (End of data from sysinfo program)
```

Compiler Version Notes

```
==============================================================================
C       | 600.perlbench_s(base) 602.gcc_s(base) 605.mcf_s(base)
        | 625.x264_s(base) 657.xz_s(base)
------------------------------------------------------------------------------
Using built-in specs.
COLLECT_GCC=/usr/bin/gcc
COLLECT_LTO_WRAPPER=/usr/lib/gcc/x86_64-linux-gnu/7/lto-wrapper
OFFLOAD_TARGET_NAMES=nvptx-none
OFFLOAD_TARGET_DEFAULT=1
Target: x86_64-linux-gnu
Configured with: ../src/configure -v --with-pkgversion='Ubuntu
  7.5.0-3ubuntu1~18.04' --with-bugurl=file:///usr/share/doc/gcc-7/README.Bugs
  --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --prefix=/usr
  --with-gcc-major-version-only --program-suffix=-7
  --program-prefix=x86_64-linux-gnu- --enable-shared --enable-linker-build-id
  --libexecdir=/usr/lib --without-included-gettext --enable-threads=posix
  --libdir=/usr/lib --enable-nls --enable-bootstrap --enable-clocale=gnu
  --enable-libstdcxx-debug --enable-libstdcxx-time=yes
  --with-default-libstdcxx-abi=new --enable-gnu-unique-object
  --disable-vtable-verify --enable-libmpx --enable-plugin
  --enable-default-pie --with-system-zlib --with-target-system-zlib
  --enable-objc-gc=auto --enable-multiarch --disable-werror
  --with-arch-32=i686 --with-abi=m64 --with-multilib-list=m32,m64,mx32
  --enable-multilib --with-tune=generic --enable-offload-targets=nvptx-none
  --without-cuda-driver --enable-checking=release --build=x86_64-linux-gnu
  --host=x86_64-linux-gnu --target=x86_64-linux-gnu
Thread model: posix
gcc version 7.5.0 (Ubuntu 7.5.0-3ubuntu1~18.04)
------------------------------------------------------------------------------

==============================================================================
C++     | 620.omnetpp_s(base) 623.xalancbmk_s(base) 631.deepsjeng_s(base)
        | 641.leela_s(base)
------------------------------------------------------------------------------
Using built-in specs.
COLLECT_GCC=/usr/bin/g++
COLLECT_LTO_WRAPPER=/usr/lib/gcc/x86_64-linux-gnu/7/lto-wrapper
OFFLOAD_TARGET_NAMES=nvptx-none
OFFLOAD_TARGET_DEFAULT=1
```


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Compiler Version Notes (Continued)

```
Target: x86_64-linux-gnu
Configured with: ../src/configure -v --with-pkgversion='Ubuntu
  7.5.0-3ubuntu1~18.04' --with-bugurl=file:///usr/share/doc/gcc-7/README.Bugs
  --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --prefix=/usr
  --with-gcc-major-version-only --program-suffix=-7
  --program-prefix=x86_64-linux-gnu- --enable-shared --enable-linker-build-id
  --libexecdir=/usr/lib --without-included-gettext --enable-threads=posix
  --libdir=/usr/lib --enable-nls --enable-bootstrap --enable-clocale=gnu
  --enable-libstdcxx-debug --enable-libstdcxx-time=yes
  --with-default-libstdcxx-abi=new --enable-gnu-unique-object
  --disable-vtable-verify --enable-libmpx --enable-plugin
  --enable-default-pie --with-system-zlib --with-target-system-zlib
  --enable-objc-gc=auto --enable-multiarch --disable-werror
  --with-arch-32=i686 --with-abi=m64 --with-multilib-list=m32,m64,mx32
  --enable-multilib --with-tune=generic --enable-offload-targets=nvptx-none
  --without-cuda-driver --enable-checking=release --build=x86_64-linux-gnu
  --host=x86_64-linux-gnu --target=x86_64-linux-gnu
Thread model: posix
gcc version 7.5.0 (Ubuntu 7.5.0-3ubuntu1~18.04)
------------------------------------------------------------------------------

==============================================================================
Fortran | 648.exchange2_s(base)
------------------------------------------------------------------------------
Using built-in specs.
COLLECT_GCC=/usr/bin/gfortran
COLLECT_LTO_WRAPPER=/usr/lib/gcc/x86_64-linux-gnu/7/lto-wrapper
OFFLOAD_TARGET_NAMES=nvptx-none
OFFLOAD_TARGET_DEFAULT=1
Target: x86_64-linux-gnu
Configured with: ../src/configure -v --with-pkgversion='Ubuntu
  7.5.0-3ubuntu1~18.04' --with-bugurl=file:///usr/share/doc/gcc-7/README.Bugs
  --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --prefix=/usr
  --with-gcc-major-version-only --program-suffix=-7
  --program-prefix=x86_64-linux-gnu- --enable-shared --enable-linker-build-id
  --libexecdir=/usr/lib --without-included-gettext --enable-threads=posix
  --libdir=/usr/lib --enable-nls --enable-bootstrap --enable-clocale=gnu
  --enable-libstdcxx-debug --enable-libstdcxx-time=yes
  --with-default-libstdcxx-abi=new --enable-gnu-unique-object
  --disable-vtable-verify --enable-libmpx --enable-plugin
  --enable-default-pie --with-system-zlib --with-target-system-zlib
  --enable-objc-gc=auto --enable-multiarch --disable-werror
  --with-arch-32=i686 --with-abi=m64 --with-multilib-list=m32,m64,mx32
  --enable-multilib --with-tune=generic --enable-offload-targets=nvptx-none
  --without-cuda-driver --enable-checking=release --build=x86_64-linux-gnu
  --host=x86_64-linux-gnu --target=x86_64-linux-gnu
Thread model: posix
```

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Compiler Version Notes (Continued)

```
gcc version 7.5.0 (Ubuntu 7.5.0-3ubuntu1~18.04)
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
gcc

C++ benchmarks:
g++

Fortran benchmarks:
gfortran

Base Portability Flags

600.perlbench_s: -DSPEC_LINUX_X64 -DSPEC_LP64
602.gcc_s: -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.omnetpp_s: -DSPEC_LP64
623.xalancbmk_s: -DSPEC_LINUX -DSPEC_LP64
625.x264_s: -DSPEC_LP64
631.deepsjeng_s: -DSPEC_LP64
641.leela_s: -DSPEC_LP64
648.exchange2_s: -DSPEC_LP64
657.xz_s: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-m64 -std=c99 -g -O3 -DSPEC_SUPPRESS_OPENMP -march=native
-fno-unsafe-math-optimizations -fno-tree-loop-vectorize -fno-openmp
-fno-strict-aliasing -fgnu89-inline

C++ benchmarks:
-m64 -std=c++03 -g -O3 -DSPEC_SUPPRESS_OPENMP -march=native
-fno-unsafe-math-optimizations -fno-tree-loop-vectorize -fno-openmp

Fortran benchmarks:
-m64 -DSPEC_SUPPRESS_OPENMP -g -O3 -march=native
-fno-unsafe-math-optimizations -fno-tree-loop-vectorize -fno-openmp

CPU2017 License: nnn (Your SPEC license number)
Test Sponsor: My Corporation
Tested by: My Corporation

Test Date: Oct-2020
Hardware Availability:
Software Availability:

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

Tested with SPEC CPU®2017 v1.1.0 on 2020-10-13 13:37:16+0000.
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