**SPEC® CPU2017 Integer Speed Result**

**PowerEdge C6420 (Intel Xeon Gold 6136, 3.00 GHz)**

<table>
<thead>
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| SPECspeed2017_int_base = 8.80 |
| SPECspeed2017_int_peak = Not Run |

### threads

<table>
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<tr>
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<th>Value</th>
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<tbody>
<tr>
<td>600.perlbench_s</td>
<td>6.14</td>
</tr>
<tr>
<td>602.gcc_s</td>
<td>9.31</td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>11.0</td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>6.16</td>
</tr>
<tr>
<td>623.xalancbmk_s</td>
<td>9.46</td>
</tr>
<tr>
<td>625.x264_s</td>
<td>5.05</td>
</tr>
<tr>
<td>631.deepsjeng_s</td>
<td>4.33</td>
</tr>
<tr>
<td>641.tleela_s</td>
<td>13.4</td>
</tr>
<tr>
<td>648.exchange2_s</td>
<td>22.4</td>
</tr>
<tr>
<td>657.xz_s</td>
<td>22.4</td>
</tr>
</tbody>
</table>

#### Hardware

- **CPU Name:** Intel Xeon Gold 6136
- **Max MHz.:** 3700
- **Nominal:** 3000
- **Enabled:** 24 cores, 2 chips, 2 threads/core
- **Orderable:** 1,2 chips
- **Cache L1:** 32 KB I + 32 KB D on chip per core
- **L2:** 1 MB I+D on chip per core
- **L3:** 24.75 MB I+D on chip per chip
- **Memory:** 192 GB (12 x 16 GB 2Rx8 PC4-2666V-R)
- **Storage:** 480 GB SATA SSD
- **Other:** None

#### Software

- **OS:** CentOS Linux release 7.4.1708 (Core) 3.10.0-693.5.2.el7.x86_64
- **Compiler:** C/C++: Version 18.0.0.128 of Intel C/C++ Compiler for Linux; Fortran: Version 18.0.0.128 of Intel Fortran Compiler for Linux
- **Parallel:** Yes
- **Firmware:** Version 1.0.8 released Jul-2017
- **File System:** xfs
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 64-bit
- **Peak Pointers:** 32/64-bit
- **Other:** jemalloc: jemalloc memory allocator library V5.0.1;
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PowerEdge C6420 (Intel Xeon Gold 6136, 3.00 GHz)

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Test Date: Dec-2017
Hardware Availability: Sep-2017
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Results Table

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<th>Benchmark</th>
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SPECspeed2017_int_base = 8.80
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,scatter"
OMP_STACKSIZE = "192M"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM memory using Redhat Enterprise Linux 7.4
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
  sync; echo 3> /proc/sys/vm/drop_caches

jemalloc: configured and built at default for
32bit (i686) and 64bit (x86_64) targets;
jemalloc: built with the RedHat Enterprise 7.4,
and the system compiler gcc 4.8.5;
jemalloc: sources available via jemalloc.net

No: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.
No: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.
No: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)
Dell Inc.  

PowerEdge C6420 (Intel Xeon Gold 6136, 3.00 GHz)  

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**CPU2017 License:** 55  
**Test Sponsor:** Dell Inc.  
**Tested by:** Dell Inc.

**General Notes (Continued)**

is mitigated in the system as tested and documented.

This benchmark result is intended to provide perspective on past performance using the historical hardware and/or software described on this result page.

The system as described on this result page was formerly generally available. At the time of this publication, it may not be shipping, and/or may not be supported, and/or may fail to meet other tests of General Availability described in the SPEC OSG Policy document, http://www.spec.org/osg/policy.html

This measured result may not be representative of the result that would be measured were this benchmark run with hardware and software available as of the publication date.

**Platform Notes**

BIOS settings:  
Virtualization Technology disabled  
System Profile set to Custom  
CPU Power Management set to Maximum Performance  
Memory Frequency set to Maximum Performance  
Turbo Boost enabled  
C States disabled  
Memory Patrol Scrub disabled  
PCI ASPM L1 Link Power Management disabled  
Sysinfo program /root/cpu2017/bin/sysinfo  
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bccc091c0f  
running on localhost.localdomain Wed Dec 20 17:55:42 2017

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) Gold 6136 CPU @ 3.00GHz  
 2 "physical id"s (chips)  
48 "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 : 12  
siblings : 24  
physical 0: cores 0 3 4 5 6 7 16 18 19 20 21 22  
physical 1: cores 0 1 2 3 4 9 10 16 18 19 25 26

(Continued on next page)
Dell Inc.

PowerEdge C6420 (Intel Xeon Gold 6136, 3.00 GHz)

**SPEC CPU2017 Integer Speed Result**

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**Dell Inc.**

PowerEdge C6420 (Intel Xeon Gold 6136, 3.00 GHz)

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**Test Date:** Dec-2017
**Hardware Availability:** Sep-2017
**Software Availability:** Sep-2017

**Platform Notes (Continued)**

From `lscpu`:
- Architecture: x86_64
- CPU op-mode(s): 32-bit, 64-bit
- Byte Order: Little Endian
- CPU(s): 48
- On-line CPU(s) list: 0-47
- Thread(s) per core: 2
- Core(s) per socket: 12
- Socket(s): 2
- NUMA node(s): 2
- Vendor ID: GenuineIntel
- CPU family: 6
- Model: 85
- Model name: Intel(R) Xeon(R) Gold 6136 CPU @ 3.00GHz
- Stepping: 4
- CPU MHz: 3000.000
- BogoMIPS: 6000.00
- Virtualization: VT-x
- L1d cache: 32K
- L1i cache: 32K
- L2 cache: 1024K
- L3 cache: 25344K
- NUMA node0 CPU(s): 0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46
- NUMA node1 CPU(s): 1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47
- 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 arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc aperfmperf eagerfpu pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 fma cx16 xtpr pdcm pcpd dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch ebт cat _13 cd p _13 intel _pt tpr_shadow vmni flexpriority ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 iesn invpcid rtm cqm mpx rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb avx512fd clwbnew xsaveopt x客观 xtgetbv1 cqm_llc cqm_occup_llc cqm_mb m_total cqm_mbb local dttherm ida arat pinn pts

From `numactl --hardware`

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

**Available:** 2 nodes (0-1)
- node 0 cpus: 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46
- node 0 size: 96965 MB
- node 0 free: 94042 MB
- node 1 cpus: 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47

(Continued on next page)
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Platform Notes (Continued)

node 1 size: 98304 MB
node 1 free: 95701 MB
node distances:
node 0 1
  0: 10 21
  1: 21 10

From /proc/meminfo
MemTotal: 196690028 kB
HugePages_Total: 128
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
centos-release: CentOS Linux release 7.4.1708 (Core)
centos-release-upstream: Derived from Red Hat Enterprise Linux 7.4 (Source)

os-release:
NAME="CentOS Linux"
VERSION="7 (Core)"
ID="centos"
ID_LIKE="rhel fedora"
VERSION_ID="7"
PRETTY_NAME="CentOS Linux 7 (Core)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:centos:centos:7"
redhat-release: CentOS Linux release 7.4.1708 (Core)
system-release: CentOS Linux release 7.4.1708 (Core)
system-release-cpe: cpe:/o:centos:centos:7

uname -a:
Linux localhost.localdomain 3.10.0-693.5.2.el7.x86_64 #1 SMP Fri Oct 20 20:32:50 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux
run-level 3 Dec 20 17:54

SPEC is set to: /root/cpu2017

Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 xfs 433G 13G 420G 3% /

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.

BIOS Dell Inc. 1.0.8 07/12/2017
Memory:
3x 002C00B3002C 18ASF2G72PDZ-2G6D1 16 GB 2 rank 2666
9x 00AD00B300AD HMA82GR7AFR8N-VK 16 GB 2 rank 2666
4x Not Specified Not Specified

(Continued on next page)
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Platform Notes (Continued)

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
CC  600.perlbench_s(base) 602.gcc_s(base) 605.mcf_s(base) 625.x264_s(base)  
657.xz_s(base)
==============================================================================
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

==============================================================================
CXXC 620.omnetpp_s(base) 623.xalancbmk_s(base) 631.deepsjeng_s(base)  
641.leela_s(base)
==============================================================================
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

==============================================================================
FC  648.exchange2_s(base)
==============================================================================
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Base Portability Flags

600.perlbench_s: -DSPEC_LP64 -DSPEC_LINUX_X64

(Continued on next page)
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**Base Portability Flags (Continued)**

602.gcc_s: -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.omnetpp_s: -DSPEC_LP64
623.xalancbmk_s: -DSPEC_LP64 -DSPEC_LINUX
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:
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=3 -qopenmp -DSPEC_OPENMP
-L/usr/local/je5.0.1-64/lib -ljemalloc

C++ benchmarks:
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=3 -L/usr/local/je5.0.1-64/lib -ljemalloc

Fortran benchmarks:
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte
-L/usr/local/je5.0.1-64/lib -ljemalloc

**Base Other Flags**

C benchmarks:
-m64 -std=c11

C++ benchmarks:
-m64

Fortran benchmarks:
-m64

The flags files that were used to format this result can be browsed at
<table>
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You can also download the XML flags sources by saving the following links:


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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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