**SPEC CPU®2017 Integer Speed Result**

**Dell Inc.**

PowerEdge C6420 (Intel Xeon Gold 6258R, 2.70 GHz)

<table>
<thead>
<tr>
<th>SPECspeed®2017_int_base</th>
<th>SPECspeed®2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.2</td>
<td>11.4</td>
</tr>
</tbody>
</table>

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

**Thread Results**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
</tr>
</thead>
<tbody>
<tr>
<td>600.perlbuch_s</td>
<td>112</td>
</tr>
<tr>
<td>602.gcc_s</td>
<td>112</td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>112</td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>112</td>
</tr>
<tr>
<td>623.xalancbmk_s</td>
<td>112</td>
</tr>
<tr>
<td>625.x264_s</td>
<td>112</td>
</tr>
<tr>
<td>631.deepsjeng_s</td>
<td>112</td>
</tr>
<tr>
<td>641.leela_s</td>
<td>112</td>
</tr>
<tr>
<td>648.exchange2_s</td>
<td>112</td>
</tr>
<tr>
<td>657.xz_s</td>
<td>112</td>
</tr>
</tbody>
</table>

**Hardware**

- **CPU Name:** Intel Xeon Gold 6258R  
- **Max MHz:** 4000  
- **Nominal:** 2700  
- **Enabled:** 56 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:** 38.5 MB I+D on chip per core  
- **Other:** None  
- **Memory:** 384 GB (12 x 32 GB 2Rx8 PC4-2933V-R, running at 2933)  
- **Storage:** 1 x 480 GB SATA SSD  
- **Other:** None  

**Software**

- **OS:** Red Hat Enterprise Linux 8.1  
  - kernel 4.18.0-147.el8.x86_64  
- **Compiler:** C/C++: Version 19.1.1.217 of Intel C/C++ Compiler for Linux; Fortran: Version 19.1.1.217 of Intel Fortran Compiler for Linux  
- **Parallel:** Yes  
- **Firmware:** Version 2.7.3 released Mar-2020  
- **File System:** tmpfs  
- **System State:** Run level 3 (multi-user)  
- **Base Pointers:** 64-bit  
- **Peak Pointers:** 64-bit  
- **Other:** jemalloc memory allocator V5.0.1  
- **Power Management:** BIOS set to prefer performance at the cost of additional power usage
## Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>600.perlbench_s</td>
<td>112</td>
<td>260</td>
<td>6.82</td>
<td>259</td>
<td>6.84</td>
<td>260</td>
<td>6.83</td>
<td>112</td>
<td>226</td>
<td>7.84</td>
<td>225</td>
<td>7.88</td>
</tr>
<tr>
<td>602.gcc_s</td>
<td>112</td>
<td>380</td>
<td>10.5</td>
<td>379</td>
<td>10.5</td>
<td>381</td>
<td>10.5</td>
<td>112</td>
<td>367</td>
<td>10.9</td>
<td>366</td>
<td>10.9</td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>112</td>
<td>247</td>
<td>19.1</td>
<td>249</td>
<td>19.0</td>
<td>249</td>
<td>19.0</td>
<td>112</td>
<td>247</td>
<td>19.1</td>
<td>249</td>
<td>19.0</td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>112</td>
<td>199</td>
<td>8.20</td>
<td>197</td>
<td>8.27</td>
<td>197</td>
<td>8.26</td>
<td>112</td>
<td>199</td>
<td>8.20</td>
<td>197</td>
<td>8.27</td>
</tr>
<tr>
<td>623.xalanchmk_s</td>
<td>112</td>
<td>102</td>
<td>13.9</td>
<td>102</td>
<td>13.9</td>
<td>102</td>
<td>13.9</td>
<td>112</td>
<td>102</td>
<td>13.9</td>
<td>102</td>
<td>13.9</td>
</tr>
<tr>
<td>625.x264_s</td>
<td>112</td>
<td>111</td>
<td>15.9</td>
<td>111</td>
<td>15.9</td>
<td>111</td>
<td>15.9</td>
<td>112</td>
<td>107</td>
<td>16.5</td>
<td>107</td>
<td>16.5</td>
</tr>
<tr>
<td>631.deepsjeng_s</td>
<td>112</td>
<td>242</td>
<td>5.92</td>
<td>242</td>
<td>5.92</td>
<td>242</td>
<td>5.92</td>
<td>112</td>
<td>242</td>
<td>5.92</td>
<td>242</td>
<td>5.92</td>
</tr>
<tr>
<td>641.leela_s</td>
<td>112</td>
<td>349</td>
<td>4.89</td>
<td>349</td>
<td>4.89</td>
<td>349</td>
<td>4.89</td>
<td>112</td>
<td>349</td>
<td>4.89</td>
<td>349</td>
<td>4.89</td>
</tr>
<tr>
<td>657.xz_s</td>
<td>112</td>
<td>248</td>
<td>24.9</td>
<td>247</td>
<td>25.0</td>
<td>248</td>
<td>25.0</td>
<td>112</td>
<td>248</td>
<td>24.9</td>
<td>247</td>
<td>25.0</td>
</tr>
</tbody>
</table>

**Compiler Notes**

The inconsistent Compiler version information under Compiler Version section is due to a discrepancy in Intel Compiler. The correct version of C/C++ compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux. The correct version of Fortran compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux.

**Submit Notes**

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

**Operating System Notes**

Stack size set to unlimited using "ulimit -s unlimited"

**Environment Variables Notes**

- Environment variables set by runcpu before the start of the run:
  - `KMP_AFFINITY = "granularity=fine,scatter"
  - `LD_LIBRARY_PATH = "/dev/shm/cpu2017-ic19.1u1/lib/intel64:/dev/shm/cpu2017-ic19.1u1/je5.0.1-64"
  - `MALLOC_CONF = "retain:true"
  - `OMP_STACKSIZE = "192M"
SPEC CPU®2017 Integer Speed Result

Dell Inc. PowerEdge C6420 (Intel Xeon Gold 6258R, 2.70 GHz)

<table>
<thead>
<tr>
<th>SPECspeed®2017_int_base</th>
<th>11.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_int_peak</td>
<td>11.4</td>
</tr>
</tbody>
</table>

CPU2017 License: 55  Test Date: May-2020
Test Sponsor: Dell Inc.  Hardware Availability: Feb-2020
Tested by: Dell Inc.  Software Availability: Apr-2020

General Notes

Binaries compiled on a system with 1x Intel Core i9-7900X CPU + 32GB RAM
memory using Redhat Enterprise Linux 7.5
NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
is mitigated in the system as tested and documented.
Yes: 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.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)
is mitigated in the system as tested and documented.
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
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
jemalloc, a general purpose malloc implementation
built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

Platform Notes

BIOS settings:
Sub NUMA Cluster enabled
Virtualization Technology disabled
System Profile set to Custom
CPU Performance set to Maximum Performance
C States set to Autonomous
C1E disabled
Uncore Frequency set to Dynamic
Energy Efficiency Policy set to Performance
Memory Patrol Scrub set to standard
Logical Processor enabled
CPU Interconnect Bus Link Power Management enabled
PCI ASPM L1 Link Power Management enabled

Sysinfo program /dev/shm/cpu2017-ic19.1ul/bin/sysinfo
Rev: r6365 of 2019-08-21 295195f888a3d7ed1be6e46a485a011
running on localhost.localdomain Sat May 23 11:58:23 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) Gold 6258R CPU @ 2.70GHz
  2 "physical id"s (chips)
  112 "processors"

(Continued on next page)
Dell Inc.

PowerEdge C6420 (Intel Xeon Gold 6258R, 2.70 GHz)

SPECspeed®2017_int_base = 11.2
SPECspeed®2017_int_peak = 11.4

Platform Notes (Continued)

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 : 28
siblings : 56
physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
28 29 30
physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
28 29 30

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 112
On-line CPU(s) list: 0-111
Thread(s) per core: 2
Core(s) per socket: 28
Socket(s): 2
NUMA node(s): 4
Vendor ID: GenuineIntel
CPU family: 6
Model: 85
Model name: Intel(R) Xeon(R) Gold 6258R CPU @ 2.70GHz
Stepping: 7
CPU MHz: 2228.673
CPU max MHz: 4000.0000
CPU min MHz: 1000.0000
BogoMIPS: 5400.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 3942K
NUMA node0 CPU(s):
0, 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, 88, 92, 96, 100, 104, 108
NUMA node1 CPU(s):
1, 5, 9, 13, 17, 21, 25, 29, 33, 37, 41, 45, 49, 53, 57, 61, 65, 69, 73, 77, 81, 85, 89, 93, 97, 101, 105, 109
NUMA node2 CPU(s):
2, 6, 10, 14, 18, 22, 26, 30, 34, 38, 42, 46, 50, 54, 58, 62, 66, 70, 74, 78, 82, 86, 90, 94, 98, 102, 106, 110
NUMA node3 CPU(s):
Flags: fpu vme de pse tsc msr pae mce 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 cpuid aperf perfctr 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

(Continued on next page)
SPEC CPU®2017 Integer Speed Result

Dell Inc.

PowerEdge C6420 (Intel Xeon Gold 6258R, 2.70 GHz)

SPECspeed®2017_int_base = 11.2
SPECspeed®2017_int_peak = 11.4

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.
Test Date: May-2020
Hardware Availability: Feb-2020
Software Availability: Apr-2020

Platform Notes (Continued)

invpcid_single intel_pinning ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vmni
flexpriority vpi tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm
ckmp mpx rdt_a_avx512f_avx512dq rdseed adx clflushopt clwb intel_pt avx512cd
avx512bw avx512vl xsaveopt xsavec xsavec xsavec xsavec xsavec xsavec xsavec
/platform_notes (Continued)

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

node 0 cpus: 0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92 96
100 104 108
node 0 size: 95278 MB
node 0 free: 93523 MB
node 1 cpus: 1 5 9 13 17 21 25 29 33 37 41 45 49 53 57 61 65 69 73 77 81 85 89 93 97
101 105 109
node 1 size: 96762 MB
node 1 free: 87785 MB
node 2 cpus: 2 6 10 14 18 22 26 30 34 38 42 46 50 54 58 62 66 70 74 78 82 86 90 94 98
102 106 110
node 2 size: 96762 MB
node 2 free: 96319 MB
node 3 cpus: 3 7 11 15 19 23 27 31 35 39 43 47 51 55 59 63 67 71 75 79 83 87 91 95 99
103 107 111
node 3 size: 96761 MB
node 3 free: 96347 MB
node distances:
node 0 1 2 3
0: 10 21 11 21
1: 11 21 10 21
2: 11 21 10 21
3: 11 21 10 21

From /proc/meminfo
MemTotal: 394818684 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
NAME="Red Hat Enterprise Linux"
VERSION="8.1 (Ootpa)"
ID="rhel"
ID_LIKE="fedora"

(Continued on next page)
SPEC CPU®2017 Integer Speed Result

Dell Inc.
PowerEdge C6420 (Intel Xeon Gold 6258R, 2.70 GHz)

SPECspeed®2017_int_base = 11.2
SPECspeed®2017_int_peak = 11.4

CPU2017 License: 55
Test Sponsor: Dell Inc.
Test Date: May-2020
Hardware Availability: Feb-2020
Tested by: Dell Inc.
Software Availability: Apr-2020

Platform Notes (Continued)

VERSION_ID="8.1"
PLATFORM_ID="platform:el8"
PRETTY_NAME="Red Hat Enterprise Linux 8.1 (Ootpa)"
ANSI_COLOR="0;31"

redhat-release: Red Hat Enterprise Linux release 8.1 (Ootpa)
system-release: Red Hat Enterprise Linux release 8.1 (Ootpa)
system-release-cpe: cpe:/o:redhat:enterprise_linux:8.1:ga

uname -a:
Linux localhost.localdomain 4.18.0-147.el8.x86_64 #1 SMP Thu Sep 26 15:52:44 UTC 2019
x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-3620 (L1 Terminal Fault): Not affected
Microarchitectural Data Sampling: Not affected
CVE-2017-5754 (Meltdown): Not affected
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: Enhanced IBRS, IBPB: conditional, RSB filling

run-level 3 May 21 17:10

SPEC is set to: /dev/shm/cpu2017-ic19.1u1
Filesystem Type Size Used Avail Use% Mounted on
tmpfs tmpfs 189G 4.2G 185G 3% /dev/shm

From /sys/devices/virtual/dmi/id
BIOS: Dell Inc. 2.7.3 03/25/2020
Vendor: Dell Inc.
Product: PowerEdge C6420
Product Family: PowerEdge

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.

Memory:
6x 00AD00B300AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933
1x 00AD063200AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933
2x 00AD063200AD HMA84GR7CJR4N-XN 32 GB 2 rank 3200
3x 00AD069D00AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933
4x Not Specified Not Specified

(Continued on next page)
Dell Inc.

PowerEdge C6420 (Intel Xeon Gold 6258R, 2.70 GHz)

Specspeed®2017_int_base = 11.2
Specspeed®2017_int_peak = 11.4

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.
Test Date: May-2020
Hardware Availability: Feb-2020
Software Availability: Apr-2020

Platform Notes (Continued)

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
C     | 600.perlbench_s(base) 602.gcc_s(base, peak) 605.mcf_s(base, peak)
     | 625.x264_s(base, peak) 657.xz_s(base, peak)
==============================================================================
Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
    NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
C     | 600.perlbench_s(peak)
==============================================================================
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
    Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
C     | 600.perlbench_s(base) 602.gcc_s(base, peak) 605.mcf_s(base, peak)
     | 625.x264_s(base, peak) 657.xz_s(base, peak)
==============================================================================
Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
    NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
C     | 600.perlbench_s(peak)
==============================================================================
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
    Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
C++   | 620.omnetpp_s(base, peak) 623.xalancbmk_s(base, peak)
      | 631.deepsjeng_s(base, peak) 641.leela_s(base, peak)
==============================================================================
Intel(R) C++ Compiler for applications running on Intel(R) 64, Version 2021.1
    NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

(Continued on next page)
## Dell Inc.

**PowerEdge C6420 (Intel Xeon Gold 6258R, 2.70 GHz)**

### SPEC CPU®2017 Integer Speed Result

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>SPECspeed®2017_int_base</th>
<th>SPECspeed®2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed</td>
<td>11.2</td>
<td>11.4</td>
</tr>
<tr>
<td>CPU2017 License</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Test Date</td>
<td>May-2020</td>
<td></td>
</tr>
<tr>
<td>Hardware Availability</td>
<td>Feb-2020</td>
<td></td>
</tr>
<tr>
<td>Software Availability</td>
<td>Apr-2020</td>
<td></td>
</tr>
<tr>
<td>Test Sponsor</td>
<td>Dell Inc.</td>
<td></td>
</tr>
<tr>
<td>Tested by</td>
<td>Dell Inc.</td>
<td></td>
</tr>
</tbody>
</table>

### Compiler Version Notes (Continued)

```plaintext
Fortran | 648.exchange2_s(base, peak)
```

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 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
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:
-m64 -mnextgen -std=c11
-W1, -plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-xCORE-AVX512 -03 -ffast-math -flto -mfpmath=sse -funroll-loops
-fuse=ld=gold -gopt-mem-layout-trans=4 -fopenmp -DSPEC_OPENMP
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
```

(Continued on next page)
Dell Inc.

PowerEdge C6420 (Intel Xeon Gold 6258R, 2.70 GHz)

SPECspeed®2017_int_base = 11.2
SPECspeed®2017_int_peak = 11.4

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

Test Date: May-2020
Hardware Availability: Feb-2020
Software Availability: Apr-2020

Base Optimization Flags (Continued)

C++ benchmarks:
-m64 -qnextgen -Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -flto -mfpmath=sse
-funroll-loops -fuse-ld=gold -qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc

Fortran benchmarks:
-m64 -Wl,-plugin-opt=-x86-branches-within-32B-boundaries -xCORE-AVX512
-O3 -ipo -no-prec-div -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte
-mbranches-within-32B-boundaries

Peak Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Peak Portability Flags

600.perlinbench_s: -DSPEC_LP64 -DSPEC_LINUX_X64
602.gcc_s: -DSPEC_LP64(*) -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.ommnetpp_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

(*) Indicates a portability flag that was found in a non-portability variable.
### SPEC CPU®2017 Integer Speed Result

**Dell Inc.**  
PowerEdge C6420 (Intel Xeon Gold 6258R, 2.70 GHz)  

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>55</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>Dell Inc.</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Dell Inc.</td>
</tr>
</tbody>
</table>

**SPECspeed®2017_int_base = 11.2**  
**SPECspeed®2017_int_peak = 11.4**

**Test Date:** May-2020  
**Hardware Availability:** Feb-2020  
**Software Availability:** Apr-2020

---

#### Peak Optimization Flags

**C benchmarks:**

- 600.perlbench_s: `-Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2)`  
- xCORE-AVX512 -ipo -O3 -no-prec-div  
- qopt-mem-layout-trans=4 -fno-strict-overflow  
- mbranches-within-32B-boundaries  
- L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

- 602.gcc_s: `-m64 -qnextgen -std=c11 -fuse-ld=gold`  
- Wl, -plugin-opt=-x86-branches-within-32B-boundaries  
- Wl, -z, muldefs -fprofile-generate(pass 1)  
- fprofile-use=default.profdata(pass 2) -xCORE-AVX512 -flto  
- Ofast(pass 1) -O3 -ffast-math -qopt-mem-layout-trans=4  
- L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

- 605.mcf_s: `basepeak = yes`

- 625.x264_s: `-m64 -qnextgen -std=c11`  
- Wl, -plugin-opt=-x86-branches-within-32B-boundaries  
- Wl, -z, muldefs -xCORE-AVX512 -flto -O3 -ffast-math  
- fuse-ld=gold -qopt-mem-layout-trans=4 -fno-alias  
- L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

- 657.xz_s: `basepeak = yes`

**C++ benchmarks:**

- 620.omnetpp_s: `basepeak = yes`

- 623.xalancbmk_s: `basepeak = yes`

- 631.deepsjeng_s: `basepeak = yes`

- 641.leela_s: `basepeak = yes`

**Fortran benchmarks:**

- 648.exchange2_s: `basepeak = yes`

---

The flags files that were used to format this result can be browsed at:


You can also download the XML flags sources by saving the following links:

# SPEC CPU®2017 Integer Speed Result

## Dell Inc.

<table>
<thead>
<tr>
<th>CPU2017 License: 55</th>
<th>Test Date: May-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor: Dell Inc.</td>
<td>Hardware Availability: Feb-2020</td>
</tr>
<tr>
<td>Tested by: Dell Inc.</td>
<td>Software Availability: Apr-2020</td>
</tr>
</tbody>
</table>

**PowerEdge C6420 (Intel Xeon Gold 6258R, 2.70 GHz)**

**SPECspeed®2017_int_base = 11.2**

**SPECspeed®2017_int_peak = 11.4**

---

SPEC CPU and SPECspeed are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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 2020-05-23 11:58:23-0400.  
Originally published on 2020-06-09.