Dell Inc.

PowerEdge C6520 (Intel Xeon Gold 6330, 2.00 GHz)

**SPEC**

**CPU Name:** Intel Xeon Gold 6330  
**Max MHz:** 3100  
**Nominal:** 2000  
**Enabled:** 56 cores, 2 chips, 2 threads/core  
**Orderable:** 1.2 chips  
**Cache L1:** 32 KB I + 48 KB D on chip per core  
**L2:** 1.25 MB I+D on chip per core  
**L3:** 42 MB I+D on chip per chip  
**Other:** None  
**Memory:** 512 GB (16 x 32 GB 2Rx8 PC4-3200AA-R, running at 2933)  
**Storage:** 125 GB on tmpfs  
**Other:** None

**OS:** Red Hat Enterprise Linux 8.3 (Ootpa)  
**Compiler:** C/C++: Version 2021.1 of Intel oneAPI DPC++/C++ Compiler Build 20201113 for Linux; Fortran: Version 2021.1 of Intel Fortran Compiler Classic Build 20201112 for Linux;  
**Parallel:** Yes  
**Firmware:** Version 1.1.2 released Apr-2021  
**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 and OS set to prefer performance at the cost of additional power usage.

---

**Test Sponsor:** Dell Inc.  
**Hardware Availability:** Apr-2021  
**Software Availability:** Dec-2020

---

**CPU2017 License:** 55  
**Test Date:** Apr-2021  
**Tested by:** Dell Inc.

---

**SPECspeed**

**SPECspeed®2017_int_base = 10.6**  
**SPECspeed®2017_int_peak = 10.9**

---

**Metrics**

<table>
<thead>
<tr>
<th>Thread</th>
<th>SPECspeed®2017_int_base</th>
<th>SPECspeed®2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>perlbench_s</td>
<td>6.40</td>
<td>8.69</td>
</tr>
<tr>
<td>gcc_s</td>
<td>9.87</td>
<td>9.87</td>
</tr>
<tr>
<td>mcf_s</td>
<td>10.3</td>
<td>10.3</td>
</tr>
<tr>
<td>omnetpp_s</td>
<td>10.8</td>
<td>15.2</td>
</tr>
<tr>
<td>xalancbmk_s</td>
<td>11.8</td>
<td>15.8</td>
</tr>
<tr>
<td>x264_s</td>
<td>15.2</td>
<td>15.2</td>
</tr>
<tr>
<td>deepsjeng_s</td>
<td>5.27</td>
<td>5.27</td>
</tr>
<tr>
<td>leela_s</td>
<td>4.50</td>
<td>4.50</td>
</tr>
<tr>
<td>exchange2_s</td>
<td>17.1</td>
<td>17.1</td>
</tr>
<tr>
<td>xz_s</td>
<td>22.0</td>
<td>22.0</td>
</tr>
</tbody>
</table>
**Dell Inc.**

PowerEdge C6520 (Intel Xeon Gold 6330, 2.00 GHz)

---

**SPEC® CPU 2017 Integer Speed Result**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</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>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>600.perlbeng_s</td>
<td>112</td>
<td>277</td>
<td>6.40</td>
<td>275</td>
<td>6.44</td>
<td></td>
<td></td>
<td>112</td>
<td>240</td>
<td>7.39</td>
<td>240</td>
<td>7.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>602.gcc_s</td>
<td>112</td>
<td>404</td>
<td>9.87</td>
<td>402</td>
<td>9.90</td>
<td></td>
<td></td>
<td>112</td>
<td>386</td>
<td>10.3</td>
<td>388</td>
<td>10.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>112</td>
<td>263</td>
<td>18.0</td>
<td>262</td>
<td>18.0</td>
<td></td>
<td></td>
<td>112</td>
<td>263</td>
<td>18.0</td>
<td>262</td>
<td>18.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>112</td>
<td>151</td>
<td>10.8</td>
<td>149</td>
<td>10.9</td>
<td></td>
<td></td>
<td>112</td>
<td>151</td>
<td>10.8</td>
<td>149</td>
<td>10.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>623.xalancbmk_s</td>
<td>112</td>
<td>117</td>
<td>12.1</td>
<td>120</td>
<td>11.8</td>
<td></td>
<td></td>
<td>112</td>
<td>117</td>
<td>12.1</td>
<td>120</td>
<td>11.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>625.x264_s</td>
<td>112</td>
<td>116</td>
<td>15.2</td>
<td>116</td>
<td>15.2</td>
<td></td>
<td></td>
<td>112</td>
<td>112</td>
<td>15.8</td>
<td>112</td>
<td>15.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>631.deepsjeng_s</td>
<td>112</td>
<td>272</td>
<td>5.27</td>
<td>271</td>
<td>5.28</td>
<td></td>
<td></td>
<td>112</td>
<td>272</td>
<td>5.27</td>
<td>271</td>
<td>5.28</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>641.leela_s</td>
<td>112</td>
<td>397</td>
<td>4.30</td>
<td>397</td>
<td>4.30</td>
<td></td>
<td></td>
<td>112</td>
<td>397</td>
<td>4.30</td>
<td>397</td>
<td>4.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>648.exchange2_s</td>
<td>112</td>
<td>172</td>
<td>17.1</td>
<td>172</td>
<td>17.1</td>
<td></td>
<td></td>
<td>112</td>
<td>172</td>
<td>17.1</td>
<td>172</td>
<td>17.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>657.xz_s</td>
<td>112</td>
<td>280</td>
<td>22.0</td>
<td></td>
<td></td>
<td>281</td>
<td>22.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>281</td>
<td>22.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SPECspeed®2017_int_base = 10.6**

**SPECspeed®2017_int_peak = 10.9**

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"

---

**Environment Variables Notes**

Environment variables set by runcpu before the start of the run:

- KMP_AFFINITY = "granularity=fine,scatter"
- LD_LIBRARY_PATH = "/mnt/ramdisk/cpu2017-1.1.7-ic2021.1/lib/intel64:/mnt/ramdisk/cpu2017-1.1.7-ic2021.1/lib/64:/mnt/ramdisk/cpu2017-1.1.7-ic2021.1/je5.0.1-64"
- MALLOCONF = "retain:true"
- OMP_STACKSIZE = "192M"

---

**General Notes**

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Redhat Enterprise Linux 8.0

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
```


(Continued on next page)
Dell Inc.  
PowerEdge C6520 (Intel Xeon Gold 6330, 2.00 GHz)

<table>
<thead>
<tr>
<th>SPECspeed®2017_int_peak</th>
<th>10.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_int_base</td>
<td>10.6</td>
</tr>
</tbody>
</table>

CPU2017 License: 55  
Test Date: Apr-2021  
Hardware Availability: Apr-2021  
Test Sponsor: Dell Inc.  
Software Availability: Dec-2020  
Tested by: Dell Inc.

General Notes (Continued)

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.

Benchmark run from a 125 GB ramdisk created with the cmd: "mount -t tmpfs -o size=125G tmpfs /mnt/ramdisk"

Platform Notes

BIOS Settings:
Virtualization Technology : Disabled
System Profile : Custom
CPU Power Management : Maximum Performance
C1E : Disabled
C States : Autonomous
Memory Patrol Scrub : Disabled
Energy Efficiency Policy : Performance
CPU Interconnect Bus Link
Power Management : Disabled

Sysinfo program /mnt/ramdisk/cpu2017-1.1.7-ic2021.1/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c
running on localhost.localdomain Wed Apr 28 09:44:12 2021

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 6330 CPU @ 2.00GHz
2 "physical id"s (chips)
112 "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 : 28
siblings : 56
physical 0: cores 0 1 2 3 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
physical 1: cores 0 1 2 3 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit

(Continued on next page)
Dell Inc.

PowerEdge C6520 (Intel Xeon Gold 6330, 2.00 GHz)

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

**SPEC CPU®2017 Integer Speed Result**

**SPECspeed®2017_int_base = 10.6**

**SPECspeed®2017_int_peak = 10.9**

---

**Platform Notes (Continued)**

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): 2
Vendor ID: GenuineIntel
CPU family: 6
Model: 106
Model name: Intel(R) Xeon(R) Gold 6330 CPU @ 2.00GHz
Stepping: 6
CPU MHz: 800.730
BogoMIPS: 4000.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 1280K
L3 cache: 43008K
NUMA node0 CPU(s): 0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62,64,66,68,70,72,74,76,78,80,82,84,86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,118
NUMA node1 CPU(s): 1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49,51,53,55,57,59
,61,63,65,67,69,71,73,75,77,79,81,83,85,87,89,91,93,95,97,99,101,103,105,107,109,111
Flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dtstic acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdelgb rdtscc lm constant_tsc arch_perfmon pbes bts rep_good nopl xtopology nonstop-tsc cpuid aperfmpref pni pclmulqdq dtes64 monitor ds_cpl vmx est tm2 ssse3 sdbg fma cx16 xtrp 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 invpcid_single intel_pinn sbbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vmmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bts hle avx2 smep bmi2 erms invvpid cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma clflushopt clwb intel_pt avx512cd sha ni avx512bw avx512vl xsaveopt xsaveopt xsave xsaveopt xsaves cqm_llc cqm_occaps llc cqm_mbb_total cqm_mbb_local split_lock_detect wbinv dtherm ida arat pln pts avx512vmbi umip pku ospe avx512_vmbi gfni vaes vpclmulqdq avx512_vnni avx512_vbitalg tme avx512_vpoccndq la57 rdpid md_clear pconfug flush_lld arch_capabilities /proc/cpuinfo cache data
cache size : 43008 KB

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 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100 102 104 106

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

Dell Inc.

PowerEdge C6520 (Intel Xeon Gold 6330, 2.00 GHz)

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

SPECspeed®2017 int_peak = 10.9
SPECspeed®2017 int_base = 10.6

Test Date: Apr-2021
Hardware Availability: Apr-2021
Software Availability: Dec-2020

Platform Notes (Continued)

108 110
node 0 size: 240756 MB
node 0 free: 212628 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 49 51
53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83 85 87 89 91 93 95 97 99 101 103 105 107
109 111
node 1 size: 243453 MB
node 1 free: 223479 MB
node distances:
node 0 1
0: 10 20
1: 20 10

From /proc/meminfo
MemTotal: 527795800 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/sbin/tuned-adm active
Current active profile: throughput-performance

From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux"
VERSION="8.3 (Ootpa)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="8.3"
PLATFORM_ID="platform:el8"
PRETTY_NAME="Red Hat Enterprise Linux 8.3 (Ootpa)"
ANSI_COLOR="0;31"
redhat-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
system-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
system-release-cpe: cpe:/o:redhat:enterprise_linux:8.3:ga

uname -a:
Linux localhost.localdomain 4.18.0-240.el8.x86_64 #1 SMP Wed Sep 23 05:13:10 EDT 2020
x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:
CVE-2018-12207 (iTLB Multihit): Not affected
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

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

**Dell Inc.**

PowerEdge C6520 (Intel Xeon Gold 6330, 2.00 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 = 10.6**

**SPECspeed®2017_int_peak = 10.9**

**Platform Notes (Continued)**

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

CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected

CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 3 Apr 23 09:48

**Test Date:** Apr-21

**Hardware Availability:** Apr-21

**Software Availability:** Dec-2020

**Compiler Version Notes**

==============================================================================
C       | 600.perlbench_s(peak)
------------------------------------------------------------------------------
Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)  
64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
==============================================================================

(Continued on next page)
### Compiler Version Notes (Continued)

<table>
<thead>
<tr>
<th>C</th>
<th>600.perlbench_s(base) 602.gcc_s(base, peak) 605.mcf_s(base, peak) 625.x264_s(base, peak) 657.xz_s(base, peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113</td>
</tr>
<tr>
<td></td>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
<tr>
<td></td>
<td>------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000</td>
</tr>
<tr>
<td></td>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
<tr>
<td></td>
<td>------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113</td>
</tr>
<tr>
<td></td>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
<tr>
<td></td>
<td>------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113</td>
</tr>
<tr>
<td></td>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
<tr>
<td></td>
<td>------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113</td>
</tr>
<tr>
<td></td>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
<tr>
<td></td>
<td>------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000</td>
</tr>
<tr>
<td></td>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
<tr>
<td></td>
<td>------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000</td>
</tr>
<tr>
<td></td>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
<tr>
<td></td>
<td>------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Fortran</td>
<td>648.exchange2_s(base, peak)</td>
</tr>
</tbody>
</table>

Dell Inc. (Intel Xeon Gold 6330, 2.00 GHz)

---

**CPU2017 License:** 55  
**Test Sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test Date:** Apr-2021  
**Hardware Availability:** Apr-2021  
**Software Availability:** Dec-2020
SPEC CPU®2017 Integer Speed Result

Dell Inc.

PowerEdge C6520 (Intel Xeon Gold 6330, 2.00 GHz)

SPECspeed®2017_int_base = 10.6
SPECspeed®2017_int_peak = 10.9

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

Test Date: Apr-2021
Hardware Availability: Apr-2021
Software Availability: Dec-2020

Base Compiler Invocation

C benchmarks:
- icx

C++ benchmarks:
- icpx

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:
-DSPEC_OPENMP -std=c11 -m64 -fiopenmp -Wl,-z,muldefs -xCORE-AVX512
-O3 -ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -mbranches-within-32B-boundaries
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

C++ benchmarks:
-DSPEC_OPENMP -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin/
-1qkmalloc

Fortran benchmarks:
-m64 -xCORE-AVX512 -O3 -ipo -no-prec-div -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-mbranches-within-32B-boundaries
Dell Inc.

PowerEdge C6520 (Intel Xeon Gold 6330, 2.00 GHz)

<table>
<thead>
<tr>
<th>Test Sponsor: Dell Inc.</th>
<th>Hardware Availability: Apr-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested by: Dell Inc.</td>
<td>Software Availability: Dec-2020</td>
</tr>
</tbody>
</table>

**SPEC CPU®2017 Integer Speed Result**

**SPECspeed®2017_int_base = 10.6**

**SPECspeed®2017_int_peak = 10.9**

**CPU2017 License:** 55

Peak Compiler Invocation

C benchmarks (except as noted below):
- icx
- 600.perlbench_s: icc

C++ benchmarks:
- icpx

Fortran benchmarks:
- ifort

Peak Portability Flags

Same as Base Portability Flags

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 -std=c11 -Wl,-z,muldefs -fprofile-generate(pass 1)
- -fprofile-use=default.profdatabypass -xCORE-AVX512 -flto
- -Ofast(pass 1) -O3 -ffast-math -qopt-mem-layout-trans=4
- -mbranches-within-32B-boundaries
- -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

- 605.mcf_s: basepeak = yes

- 625.x264_s: -DSPEC_OPENMP -fiopenmp -std=c11 -m64 -Wl,-z,muldefs
- -xCORE-AVX512 -flto -O3 -ffast-math
- -qopt-mem-layout-trans=4 -fno-alias
- -mbranches-within-32B-boundaries
- -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

- 657.xz_s: basepeak = yes

(Continued on next page)
Peak Optimization Flags (Continued)

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 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 v1.1.7 on 2021-04-28 10:44:11-0400.
Originally published on 2021-05-25.