## SPEC CPU®2017 Integer Speed Result

**Dell Inc.**  
(Test Sponsor: Dell Inc)

PowerEdge MX740c (Intel Xeon Gold 6242R, 3.10 GHz)

<table>
<thead>
<tr>
<th>Software Availability: Apr-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Date: Apr-2020</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPECspeed®2017_int_base = 11.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_int_peak = 11.5</td>
</tr>
</tbody>
</table>

### test sponsor: Dell Inc

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

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name: Intel Xeon Gold 6242R</td>
<td>OS: Red Hat Enterprise Linux 8.1</td>
</tr>
<tr>
<td>Max MHz: 4100</td>
<td>kernel 4.18.0-147.el8.x86_64</td>
</tr>
<tr>
<td>Nominal: 3100</td>
<td>Compiler: C/C++: Version 19.1.1.217 of Intel C/C++</td>
</tr>
<tr>
<td>Enabled: 40 cores, 2 chips, 2 threads/core</td>
<td>Compiler for Linux; Fortran: Version 19.1.1.217 of Intel Fortran</td>
</tr>
<tr>
<td>Orderable: 1.2 chips</td>
<td>Compiler for Linux</td>
</tr>
<tr>
<td>Cache L1: 32 KB I + 32 KB D on chip per core</td>
<td>Parallel: Yes</td>
</tr>
<tr>
<td>L2: 1 MB I+D on chip per core</td>
<td>Firmware: Version 2.7.1 released Feb-2020</td>
</tr>
<tr>
<td>L3: 35.75 MB I+D on chip per chip</td>
<td>File System: tmpfs</td>
</tr>
<tr>
<td>Other: None</td>
<td>System State: Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Memory: 768 GB (24 x 32 GB 2Rx4 PC4-2933Y-R)</td>
<td>Base Pointers: 64-bit</td>
</tr>
<tr>
<td>Storage: 1 x 960 GB SATA SSD</td>
<td>Peak Pointers: 64-bit</td>
</tr>
<tr>
<td>Other: None</td>
<td>Other: jemalloc memory allocator V5.0.1</td>
</tr>
<tr>
<td>Power Management: BIOS set to prefer performance at the cost of additional power usage</td>
<td></td>
</tr>
</tbody>
</table>

### Threads

<table>
<thead>
<tr>
<th>Test</th>
<th>Threads</th>
<th>SPECspeed®2017_int_base</th>
<th>SPECspeed®2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>perlbench_s</td>
<td>80</td>
<td>6.96</td>
<td>8.00</td>
</tr>
<tr>
<td>gcc_s</td>
<td>80</td>
<td>10.6</td>
<td>11.0</td>
</tr>
<tr>
<td>mcf_s</td>
<td>80</td>
<td>19.2</td>
<td></td>
</tr>
<tr>
<td>omnetpp_s</td>
<td>80</td>
<td>8.00</td>
<td>14.2</td>
</tr>
<tr>
<td>xalancbmk_s</td>
<td>80</td>
<td>16.8</td>
<td></td>
</tr>
<tr>
<td>x264_s</td>
<td>80</td>
<td>8.00</td>
<td></td>
</tr>
<tr>
<td>deepsjeng_s</td>
<td>80</td>
<td>16.1</td>
<td></td>
</tr>
<tr>
<td>leela_s</td>
<td>80</td>
<td>5.01</td>
<td></td>
</tr>
<tr>
<td>exchange2_s</td>
<td>80</td>
<td>17.2</td>
<td></td>
</tr>
<tr>
<td>xz_s</td>
<td>80</td>
<td>24.8</td>
<td></td>
</tr>
</tbody>
</table>
### Results Table

<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>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>80</td>
<td>255</td>
<td>6.96</td>
<td>256</td>
<td>6.94</td>
<td>254</td>
<td>6.98</td>
<td>256</td>
<td>6.94</td>
<td>222</td>
<td>8.00</td>
<td>222</td>
<td>7.99</td>
</tr>
<tr>
<td>602.gcc_s</td>
<td>80</td>
<td>376</td>
<td>10.6</td>
<td>375</td>
<td>10.6</td>
<td>376</td>
<td>10.6</td>
<td>363</td>
<td>11.0</td>
<td>362</td>
<td>11.0</td>
<td>363</td>
<td>11.0</td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>80</td>
<td>244</td>
<td>19.3</td>
<td>246</td>
<td>19.2</td>
<td>246</td>
<td>19.2</td>
<td>246</td>
<td>19.2</td>
<td>246</td>
<td>19.2</td>
<td>246</td>
<td>19.2</td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>80</td>
<td>204</td>
<td>8.00</td>
<td>204</td>
<td>8.00</td>
<td>203</td>
<td>8.04</td>
<td>204</td>
<td>8.00</td>
<td>204</td>
<td>8.00</td>
<td>203</td>
<td>8.04</td>
</tr>
<tr>
<td>623.xalanchmk_s</td>
<td>80</td>
<td>99.7</td>
<td>14.2</td>
<td>99.9</td>
<td>14.2</td>
<td>99.5</td>
<td>14.2</td>
<td>99.9</td>
<td>14.2</td>
<td>99.5</td>
<td>14.2</td>
<td>99.5</td>
<td>14.2</td>
</tr>
<tr>
<td>625.x264_s</td>
<td>80</td>
<td>110</td>
<td>16.1</td>
<td>110</td>
<td>16.1</td>
<td>110</td>
<td>16.1</td>
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<td>16.7</td>
<td>105</td>
<td>16.7</td>
<td>105</td>
<td>16.7</td>
</tr>
<tr>
<td>631.deepsjeng_s</td>
<td>80</td>
<td>237</td>
<td>6.05</td>
<td>237</td>
<td>6.03</td>
<td>237</td>
<td>6.05</td>
<td>237</td>
<td>6.03</td>
<td>237</td>
<td>6.05</td>
<td>237</td>
<td>6.05</td>
</tr>
<tr>
<td>641.leela_s</td>
<td>80</td>
<td>340</td>
<td>5.01</td>
<td>340</td>
<td>5.01</td>
<td>341</td>
<td>5.01</td>
<td>340</td>
<td>5.01</td>
<td>341</td>
<td>5.01</td>
<td>341</td>
<td>5.01</td>
</tr>
<tr>
<td>648.exchange2_s</td>
<td>80</td>
<td>170</td>
<td>17.3</td>
<td>171</td>
<td>17.2</td>
<td>171</td>
<td>17.2</td>
<td>171</td>
<td>17.2</td>
<td>171</td>
<td>17.2</td>
<td>171</td>
<td>17.2</td>
</tr>
<tr>
<td>657.xz_s</td>
<td>80</td>
<td>250</td>
<td>24.8</td>
<td>249</td>
<td>24.8</td>
<td>249</td>
<td>24.8</td>
<td>250</td>
<td>24.8</td>
<td>249</td>
<td>24.8</td>
<td>249</td>
<td>24.8</td>
</tr>
</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

### 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"
MALLOCD_CONF = "retain:true"
OMP_STACKSIZE = "192M"
SPEC CPU®2017 Integer Speed Result

Dell Inc.
(Test Sponsor: Dell Inc)

PowerEdge MX740c (Intel Xeon Gold 6242R, 3.10 GHz)

| SPECspeed®2017_int_base = 11.3 |
| SPECspeed®2017_int_peak = 11.5 |

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

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

General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Redhat Enterprise Linux 8.0
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 disabled
PCI ASPM L1 Link Power Management disabled
UPI Prefetch enabled
LLC Prefetch disabled
Dead Line LLC Alloc enabled
Directory AtoS disabled

Sysinfo program /dev/shm/cpu2017-ic19.1u1/bin/sysinfo
Rev: r6365 of 2019-08-21 295195f888a3d7ed1e6e46a485a0011
running on localhost.localdomain Mon Jul 20 19:58:39 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

(Continued on next page)
Dell Inc.
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PowerEdge MX740c (Intel Xeon Gold 6242R, 3.10 GHz)

SPECspeed®2017_int_base = 11.3
SPECspeed®2017_int_peak = 11.5

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

Platform Notes (Continued)

From /proc/cpuinfo
model name: Intel(R) Xeon(R) Gold 6242R CPU @ 3.10GHz
  2 "physical id"s (chips)
  80 "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: 20
siblings: 40
physical 0: cores 0 1 3 5 6 8 10 12 13 16 17 18 19 20 21 25 26 27 28 29
physical 1: cores 0 1 2 4 5 6 8 9 10 11 12 13 16 17 18 19 21 26 28 29

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 80
On-line CPU(s) list: 0-79
Thread(s) per core: 2
Core(s) per socket: 20
Socket(s): 2
NUMA node(s): 4
Vendor ID: GenuineIntel
CPU family: 6
Model: 85
Model name: Intel(R) Xeon(R) Gold 6242R CPU @ 3.10GHz
Stepping: 7
CPU MHz: 3650.357
CPU max MHz: 4100.0000
CPU min MHz: 1200.0000
BogoMIPS: 6200.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 36608K
NUMA node0 CPU(s): 0,4,8,12,16,20,24,28,32,36,40,44,48,52,56,60,64,68,72,76
NUMA node1 CPU(s): 1,5,9,13,17,21,25,29,33,37,41,45,49,53,57,61,65,69,73,77
NUMA node2 CPU(s): 2,6,10,14,18,22,26,30,34,38,42,46,50,54,58,62,66,70,74,78
NUMA node3 CPU(s): 3,7,11,15,19,23,27,31,35,39,43,47,51,55,59,63,67,71,75,79
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 intel_ppin ssbd mba ibrs ibpb stibp ibrs Enhanced tpr_shadow vmvi flexpriority ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm

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

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<table>
<thead>
<tr>
<th>SPECspeed®2017_int_base</th>
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</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_int_peak</td>
<td>11.5</td>
</tr>
</tbody>
</table>

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

**Platform Notes (Continued)**

```plaintext
cqm mpx rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd avx512bw avx512vl xsaveopt xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local dtherm ida arat pln pts pku ospke avx512_vnni md_clear flush_l1d arch_capabilities
```

```plaintext
From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a physical chip.
available: 4 nodes (0-3)
node 0 cpus: 0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76
node 0 size: 192071 MB
node 0 free: 182496 MB
node 1 cpus: 1 5 9 13 17 21 25 29 33 37 41 45 49 53 57 61 65 69 73 77
node 1 size: 193506 MB
node 1 free: 193270 MB
node 2 cpus: 2 6 10 14 18 22 26 30 34 38 42 46 50 54 58 62 66 70 74 78
node 2 size: 193531 MB
node 2 free: 192053 MB
node 3 cpus: 3 7 11 15 19 23 27 31 35 39 43 47 51 55 59 63 67 71 75 79
node 3 size: 193531 MB
node 3 free: 193368 MB
node distances:
node 0 1 2 3
 0: 10 21 11 21
 1: 21 10 21 11
 2: 11 21 10 21
 3: 21 11 21 10
```

From `/proc/meminfo`

<table>
<thead>
<tr>
<th>MemTotal:</th>
<th>791184568 kB</th>
</tr>
</thead>
<tbody>
<tr>
<td>HugePages_Total:</td>
<td>0</td>
</tr>
<tr>
<td>Hugepagesize:</td>
<td>2048 kB</td>
</tr>
</tbody>
</table>

From `/etc/*release* /etc/*version*`

<table>
<thead>
<tr>
<th>os-release:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME=&quot;Red Hat Enterprise Linux&quot;</td>
</tr>
<tr>
<td>VERSION=&quot;8.1 (Ootpa)&quot;</td>
</tr>
<tr>
<td>ID=&quot;rhel&quot;</td>
</tr>
<tr>
<td>ID_LIKE=&quot;fedora&quot;</td>
</tr>
<tr>
<td>VERSION_ID=&quot;8.1&quot;</td>
</tr>
<tr>
<td>PLATFORM_ID=&quot;platform:el8&quot;</td>
</tr>
<tr>
<td>PRETTY_NAME=&quot;Red Hat Enterprise Linux 8.1 (Ootpa)&quot;</td>
</tr>
<tr>
<td>ANSI_COLOR=&quot;0;31&quot;</td>
</tr>
<tr>
<td>redhat-release: Red Hat Enterprise Linux release 8.1 (Ootpa)</td>
</tr>
<tr>
<td>system-release: Red Hat Enterprise Linux release 8.1 (Ootpa)</td>
</tr>
</tbody>
</table>

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

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SPECspeed®2017_int_base = 11.3
SPECspeed®2017_int_peak = 11.5

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

Platform Notes (Continued)

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 sanitation
CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling

run-level 3 Jul 20 16:29

SPEC is set to: /dev/shm/cpu2017-ic19.1u1

Filesystem     Type   Size  Used Avail Use% Mounted on
tmpfs          tmpfs  378G  4.2G  374G   2% /dev/shm

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:
    21x 00AD00B300AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933
    1x 00AD063200AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933
    2x 00AD069D00AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
C       | 600.perlbench_s(base) 602.gcc_s(base, peak) 605.mcf_s(base, peak)
==============================================================================

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

<table>
<thead>
<tr>
<th>625.x264_s(base, peak) 657.xz_s(base, peak)</th>
</tr>
</thead>
</table>

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.

---

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.
Dell Inc. (Test Sponsor: Dell Inc)
PowerEdge MX740c (Intel Xeon Gold 6242R, 3.10 GHz)

**SPEC CPU®2017 Integer Speed Result**

Copyright 2017-2020 Standard Performance Evaluation Corporation

**Spec CPU2017 int_base** = 11.3
**Spec CPU2017 int_peak** = 11.5

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<td>Dell Inc</td>
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</tbody>
</table>

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

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**Compiler Version Notes (Continued)**

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**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 -qnextgen -std=c11
-W1,-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 -fopenmp -DSPEC_OPENMP
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

C++ benchmarks:
-m64 -qnextgen -Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-W1,-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

(Continued on next page)
## Base Optimization Flags (Continued)

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 Portatility Flags

600.perlbench_s: `-DSPEC_LP64 -DSPEC_LINUX_X64`  
602.gcc_s: `-DSPEC_LP64(*) -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`

(*) Indicates a portability flag that was found in a non-portability variable.

## 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`

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

**Dell Inc.**  
(Test Sponsor: Dell Inc)  
PowerEdge MX740c (Intel Xeon Gold 6242R, 3.10 GHz)  

<table>
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<th>CPU2017 License: 55</th>
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<tr>
<td>Tested by: Dell Inc.</td>
<td>Software Availability: Apr-2020</td>
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**SPECspeed®2017_int_base = 11.3**  
**SPECspeed®2017_int_peak = 11.5**

### Peak Optimization Flags (Continued)

600.perlbench_s (continued):
- `-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`

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:

http://www.spec.org/cpu2017/flags/Intel-ic19.1u1-official-linux64_revA.xml  
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