# SPEC CPU®2017 Integer Speed Result

## Dell Inc.

**PowerEdge R750 xa (Intel Xeon Platinum 8368Q, 2.60 GHz)**

<table>
<thead>
<tr>
<th></th>
<th>SPECspeed®2017_int_base = 12.5</th>
<th>SPECspeed®2017_int_peak = 12.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU2017 License:</td>
<td>55</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>
<tr>
<td>Test Date:</td>
<td>Apr-2021</td>
<td></td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>May-2021</td>
<td></td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Feb-2021</td>
<td></td>
</tr>
</tbody>
</table>

### Threads

<table>
<thead>
<tr>
<th>Replacement</th>
<th>SPECspeed®2017_int_base (12.5)</th>
<th>SPECspeed®2017_int_peak (12.8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>600.perlbench_s 76</td>
<td>8.71</td>
<td></td>
</tr>
<tr>
<td>602.gcc_s 76</td>
<td>11.4</td>
<td></td>
</tr>
<tr>
<td>605.mcf_s 76</td>
<td>11.8</td>
<td></td>
</tr>
<tr>
<td>620.omnetpp_s 76</td>
<td>20.9</td>
<td></td>
</tr>
<tr>
<td>623.xalancbmk_s 76</td>
<td>14.3</td>
<td></td>
</tr>
<tr>
<td>625.x264_s 76</td>
<td>18.1</td>
<td></td>
</tr>
<tr>
<td>631.deepsjeng_s 76</td>
<td>6.24</td>
<td></td>
</tr>
<tr>
<td>641.leela_s 76</td>
<td>5.12</td>
<td></td>
</tr>
<tr>
<td>648.exchange2_s 76</td>
<td>20.5</td>
<td></td>
</tr>
<tr>
<td>657.xz_s 76</td>
<td>25.5</td>
<td></td>
</tr>
</tbody>
</table>

### Hardware

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name:</td>
<td>Intel Xeon Platinum 8368Q</td>
</tr>
<tr>
<td>Max MHz:</td>
<td>3700</td>
</tr>
<tr>
<td>Nominal:</td>
<td>2600</td>
</tr>
<tr>
<td>Enabled:</td>
<td>76 cores, 2 chips</td>
</tr>
<tr>
<td>Orderable:</td>
<td>1.2 chips</td>
</tr>
<tr>
<td>Cache L1:</td>
<td>32 KB I + 48 KB D on chip per core</td>
</tr>
<tr>
<td>L2:</td>
<td>1.25 MB I+D on chip per core</td>
</tr>
<tr>
<td>L3:</td>
<td>57 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other:</td>
<td>None</td>
</tr>
<tr>
<td>Memory:</td>
<td>512 GB (16 x 32 GB 2Rx8 PC4-3200AA-R)</td>
</tr>
<tr>
<td>Storage:</td>
<td>225 GB on tmpfs</td>
</tr>
<tr>
<td>Other:</td>
<td>None</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS:</td>
<td>Red Hat Enterprise Linux 8.3 (Ootpa)</td>
</tr>
<tr>
<td>Compiler:</td>
<td>C/C++: Version 2021.1 of Intel oneAPI DPC++/C++</td>
</tr>
<tr>
<td></td>
<td>Compiler Build 20201113 for Linux;</td>
</tr>
<tr>
<td></td>
<td>Fortran: Version 2021.1 of Intel Fortran Compiler</td>
</tr>
<tr>
<td></td>
<td>Classic Build 20201112 for Linux;</td>
</tr>
<tr>
<td></td>
<td>C/C++: Version 2021.1 of Intel C/C++ Compiler</td>
</tr>
<tr>
<td></td>
<td>Classic Build 20201112 for Linux;</td>
</tr>
<tr>
<td>Parallel:</td>
<td>Yes</td>
</tr>
<tr>
<td>Firmware:</td>
<td>Version 1.1.2 released Apr-2021</td>
</tr>
<tr>
<td>File System:</td>
<td>tmpfs</td>
</tr>
<tr>
<td>System State:</td>
<td>Run level 5 (graphical multi-user)</td>
</tr>
<tr>
<td>Base Pointers:</td>
<td>64-bit</td>
</tr>
<tr>
<td>Peak Pointers:</td>
<td>64-bit</td>
</tr>
<tr>
<td>Other:</td>
<td>None</td>
</tr>
<tr>
<td>Power Management:</td>
<td>BIOS and OS set to prefer performance</td>
</tr>
<tr>
<td></td>
<td>at the cost of additional power usage.</td>
</tr>
</tbody>
</table>

jemalloc memory allocator V5.0.1

Power Management: BIOS and OS set to prefer performance at the cost of additional power usage.
SPEC CPU®2017 Integer Speed Result

Dell Inc.
PowerEdge R750 xa (Intel Xeon Platinum 8368Q, 2.60 GHz)

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

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>
</tr>
</thead>
<tbody>
<tr>
<td>600.perlbench_s</td>
<td>76 233 7.60</td>
<td>234</td>
<td>7.58</td>
<td>235 7.56</td>
<td>76</td>
<td>204</td>
<td>8.71</td>
</tr>
<tr>
<td>602.gcc_s</td>
<td>76 350 11.4</td>
<td>350</td>
<td>11.4</td>
<td>350</td>
<td>11.4</td>
<td>76</td>
<td>338</td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>76 226</td>
<td>226 20.9</td>
<td>226</td>
<td>20.9</td>
<td>226</td>
<td>20.8</td>
<td>76</td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>76</td>
<td>131</td>
<td>12.4</td>
<td>132</td>
<td>12.4</td>
<td>127</td>
<td>12.9</td>
</tr>
<tr>
<td>623.xalanchmk_s</td>
<td>76 99.1</td>
<td>99</td>
<td>14.3</td>
<td>99</td>
<td>14.3</td>
<td>98.9</td>
<td>14.3</td>
</tr>
<tr>
<td>625.x264_s</td>
<td>76 97.6</td>
<td>97.6</td>
<td>18.1</td>
<td>97.5</td>
<td>18.1</td>
<td>97.5</td>
<td>18.1</td>
</tr>
<tr>
<td>641.leela_s</td>
<td>76</td>
<td>333</td>
<td>5.12</td>
<td>333</td>
<td>5.13</td>
<td>334</td>
<td>5.11</td>
</tr>
<tr>
<td>648.exchange2_s</td>
<td>76</td>
<td>143</td>
<td>20.5</td>
<td>144</td>
<td>20.5</td>
<td>144</td>
<td>20.5</td>
</tr>
<tr>
<td>657.xz_s</td>
<td>76</td>
<td>243</td>
<td>25.5</td>
<td>243</td>
<td>25.5</td>
<td>243</td>
<td>25.5</td>
</tr>
</tbody>
</table>

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/cpu2017-1.1.5-ic2021.1/lib/intel64:/mnt/ramdisk/cpu2017-1.1.5-ic2021.1/je5.0.1-64"
MALLOC_CONF = "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
jemalloc, a general purpose malloc implementation
built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

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

**Dell Inc.**

PowerEdge R750 xa (Intel Xeon Platinum 8368Q, 2.60 GHz)

| SPECspeed®2017_int_base = 12.5 |
| SPECspeed®2017_int_peak = 12.8 |

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

| Test Date: | Apr-2021 |
| Hardware Availability: | May-2021 |
| Software Availability: | Feb-2021 |

**General Notes (Continued)**

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 225 GB ramdisk created with the cmd: "mount -t tmpfs -o size=225G tmpfs /mnt/ramdisk"

**Platform Notes**

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

**Sysinfo program** /mnt/ramdisk/cpu2017-1.1.5-ic2021.1/bin/sysinfo

Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c
running on localhost.localdomain Tue Apr 27 09:14:00 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) Platinum 8368Q CPU @ 2.60GHz
 2 "physical id"s (chips)
 76 "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 : 38
siblings : 38
physical 0: cores 0 1 2 3 4 5 6 7 8 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
physical 1: cores 0 1 2 3 4 5 6 7 8 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
```

From lscpu:

```
Architecture: x86_64
```

(Continued on next page)
Dell Inc.
PowerEdge R750 xa (Intel Xeon Platinum 8368Q, 2.60 GHz)

SPECspeed®2017_int_base = 12.5
SPECspeed®2017_int_peak = 12.8

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

Test Date: Apr-2021
Hardware Availability: May-2021
Software Availability: Feb-2021

CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 76
On-line CPU(s) list: 0-75
Thread(s) per core: 1
Core(s) per socket: 38
Socket(s): 2
NUMA node(s): 2
Vendor ID: GenuineIntel
CPU family: 6
Model: 106
Model name: Intel(R) Xeon(R) Platinum 8368Q CPU @ 2.60GHz
Stepping: 6
CPU MHz: 3499.625
BogoMIPS: 5200.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 1280K
L3 cache: 58368K

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
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

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
xtrq pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave
avx f16c rdrand lahf_lm abm 3nowprefetch cpuid_fault epb cat_l3 invpcid_single
intel_ppn ssbd mba ibrs ibpb stibp ibrs_enhanced fsgsbase tsc_adjust bmi1 hle avx2
smea bmi2 erms invpcid cmqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma
clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec xgetbv1
xsavec cmqm_llc cmqm_occup_llc cmqm_mbb_total cmqm_mbb_local split_lock_detect
wbinvd dtcortex aiatl pti avx512vpbig mcmคง pcommit flush_l1d
arch_capabilities

/proc/cpuinfo cache data
cache size : 58368 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

(Continued on next page)
Dell Inc.

PowerEdge R750 xa (Intel Xeon Platinum 8368Q, 2.60 GHz)

SPEC CPU®2017 Integer Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

SPECspeed®2017_int_base = 12.5
SPECspeed®2017_int_peak = 12.8

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

Test Date: Apr-2021
Hardware Availability: May-2021
Software Availability: Feb-2021

Platform Notes (Continued)

52 54 56 58 60 62 64 66 68 70 72 74
node 0 size: 243640 MB
node 0 free: 241231 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
node 1 size: 245871 MB
node 1 free: 256870 MB

node distances:
node 0 1
  0: 10 20
  1: 20 10

From /proc/meminfo
MemTotal: 527805896 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 4.18.0-240.15.1.el8_3.x86_64 #1 SMP Wed Feb 3 03:12:15 EST 2021 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 seccomp

(Continued on next page)
## Dell Inc.

**PowerEdge R750 xa (Intel Xeon Platinum 8368Q, 2.60 GHz)**

**SPEC CPU®2017 Integer Speed Result**

<table>
<thead>
<tr>
<th><strong>CPU2017 License:</strong></th>
<th>55</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test Sponsor:</strong></td>
<td>Dell Inc.</td>
</tr>
<tr>
<td><strong>Tested by:</strong></td>
<td>Dell Inc.</td>
</tr>
<tr>
<td><strong>SPECspeed®2017_int_base</strong></td>
<td>12.5</td>
</tr>
<tr>
<td><strong>SPECspeed®2017_int_peak</strong></td>
<td>12.8</td>
</tr>
</tbody>
</table>

**Test Date:** Apr-2021  
**Hardware Availability:** May-2021  
**Software Availability:** Feb-2021

### 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 5  
run 27 09:12

**SPEC is set to:** /mnt/ramdisk/cpu2017-1.1.5-ic2021.1

Filesystem     Type   Size  Used Avail Use% Mounted on  
tmpfs          tmpfs  225G  6.9G  219G   4% /mnt/ramdisk

From /sys/devices/virtual/dmi/id  
Vendor:         Dell Inc.  
Product:        PowerEdge R750 xa  
Product Family: PowerEdge  
Serial:         1234567

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:**  
16x 002C069D002C 18ASF4G72PDZ-3G2E1 32 GB 2 rank 3200  
16x Not Specified Not Specified

**BIOS:**  
BIOS Vendor:     Dell Inc.  
BIOS Version:    1.1.2  
BIOS Date:       04/09/2021  
BIOS Revision:   1.1

(End of data from sysinfo program)

### 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)
Dell Inc.
PowerEdge R750 xa (Intel Xeon Platinum 8368Q, 2.60 GHz)

Compiler Version Notes (Continued)

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

==============================================================================
<table>
<thead>
<tr>
<th>C</th>
<th>600.perlbench_s(peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000</td>
<td></td>
</tr>
<tr>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
</tbody>
</table>

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

==============================================================================
<p>| C++         | 620.omnetpp_s(base, peak) 623.xalancbmk_s(base, peak) |</p>
<table>
<thead>
<tr>
<th></th>
<th>631.deepsjeng_s(base, peak) 641.leela_s(base, peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113</td>
<td></td>
</tr>
<tr>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
</tbody>
</table>

==============================================================================
<table>
<thead>
<tr>
<th>Fortran</th>
<th>648.exchange2_s(base, peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000</td>
<td></td>
</tr>
<tr>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
<td></td>
</tr>
</tbody>
</table>
SPEC CPU®2017 Integer Speed Result

Dell Inc.
PowerEdge R750 xa (Intel Xeon Platinum 8368Q, 2.60 GHz)

SPECspeed®2017_int_base = 12.5
SPECspeed®2017_int_peak = 12.8

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

Test Date: Apr-2021
Hardware Availability: May-2021
Software Availability: Feb-2021

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/
-lqkmalloc

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
SPEC CPU®2017 Integer Speed Result

Dell Inc.
PowerEdge R750 xa (Intel Xeon Platinum 8368Q, 2.60 GHz)

SPECspeed®2017_int_base = 12.5
SPECspeed®2017_int_peak = 12.8

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

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.profdata(pass 2) -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)
Dell Inc.
PowerEdge R750 xa (Intel Xeon Platinum 8368Q, 2.60 GHz)  

<table>
<thead>
<tr>
<th>CPU2017 License: 55</th>
<th>Test Date: Apr-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor: Dell Inc.</td>
<td>Hardware Availability: May-2021</td>
</tr>
<tr>
<td>Tested by: Dell Inc.</td>
<td>Software Availability: Feb-2021</td>
</tr>
</tbody>
</table>

**SPEC CPU®2017 Integer Speed Result**

| SPECspeed®2017_int_base = 12.5 | SPECspeed®2017_int_peak = 12.8 |

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:
http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.xml

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 v1.1.5 on 2021-04-26 21:13:59-0400.
Originally published on 2021-05-25.