# SPEC CPU®2017 Floating Point Speed Result

## Dell Inc.

### PowerEdge MX840c (Intel Xeon Gold 6248, 2.50GHz)

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

<table>
<thead>
<tr>
<th>Threads</th>
<th>SPECspeed®2017_fp_base = 194</th>
<th>SPECspeed®2017_fp_peak = 195</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>SPECspeed®2017_fp_base = 194</td>
<td>SPECspeed®2017_fp_peak = 195</td>
</tr>
<tr>
<td>80</td>
<td>197</td>
<td>194</td>
</tr>
</tbody>
</table>

### Hardware

- **CPU Name:** Intel Xeon Gold 6248  
- **Max MHz:** 3900  
- **Nominal:** 2500  
- **Enabled:** 80 cores, 4 chips  
- **Orderable:** 2.4 chips  
- **Cache L1:** 32 KB I + 32 KB D on chip per core  
- **L2:** 1 MB I+D on chip per core  
- **L3:** 27.5 MB I+D on chip per chip  
- **Memory:** 768 GB (24 x 32 GB 2Rx4 PC4-2933Y-R)  
- **Storage:** 1 x 480 GB SATA SSD  
- **Other:** None

### Software

- **OS:** Ubuntu 18.04.2 LTS  
  kernel 4.15.0-45-generic  
- **Compiler:** C/C++: Version 19.0.4.227 of Intel C/C++  
  Compiler Build 20190416 for Linux; Fortran: Version 19.0.4.227 of Intel Fortran  
  Compiler Build 20190416 for Linux  
- **Parallel:** Yes  
- **Firmware:** Version 2.2.9 released May-2019  
- **File System:** ext4  
- **System State:** Run level 3 (multi-user)  
- **Base Pointers:** 64-bit  
- **Peak Pointers:** 64-bit  
- **Other:** None  
- **Power Management:** --
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>
</tr>
</thead>
<tbody>
<tr>
<td>603.bwaves_s</td>
<td>80</td>
<td>68.7</td>
<td>858</td>
<td>70.3</td>
<td>839</td>
<td>69.1</td>
<td>854</td>
<td>70.3</td>
<td>839</td>
</tr>
<tr>
<td>607.cactuBSSN_s</td>
<td>80</td>
<td>83.3</td>
<td>200</td>
<td>84.6</td>
<td>197</td>
<td>84.4</td>
<td>197</td>
<td>83.8</td>
<td>199</td>
</tr>
<tr>
<td>619.lbm_s</td>
<td>80</td>
<td>45.0</td>
<td>116</td>
<td>42.4</td>
<td>124</td>
<td>43.0</td>
<td>122</td>
<td>80.3</td>
<td>135</td>
</tr>
<tr>
<td>621.wrf_s</td>
<td>80</td>
<td>97.4</td>
<td>136</td>
<td>97.0</td>
<td>136</td>
<td>97.6</td>
<td>135</td>
<td>98.0</td>
<td>135</td>
</tr>
<tr>
<td>627.cam4_s</td>
<td>80</td>
<td>59.3</td>
<td>149</td>
<td>59.3</td>
<td>149</td>
<td>59.4</td>
<td>149</td>
<td>80.9</td>
<td>150</td>
</tr>
<tr>
<td>628.pop2_s</td>
<td>80</td>
<td>185</td>
<td>64.2</td>
<td>184</td>
<td>64.5</td>
<td>187</td>
<td>63.4</td>
<td>184</td>
<td>64.4</td>
</tr>
<tr>
<td>638.imagick_s</td>
<td>80</td>
<td>68.8</td>
<td>210</td>
<td>68.7</td>
<td>210</td>
<td>68.7</td>
<td>210</td>
<td>68.0</td>
<td>212</td>
</tr>
<tr>
<td>644.nab_s</td>
<td>80</td>
<td>43.8</td>
<td>399</td>
<td>43.8</td>
<td>399</td>
<td>43.8</td>
<td>399</td>
<td>43.8</td>
<td>399</td>
</tr>
<tr>
<td>649.fotonik3d_s</td>
<td>80</td>
<td>82.2</td>
<td>111</td>
<td>85.4</td>
<td>107</td>
<td>86.1</td>
<td>106</td>
<td>80.3</td>
<td>114</td>
</tr>
<tr>
<td>654.roms_s</td>
<td>80</td>
<td>50.6</td>
<td>311</td>
<td>50.7</td>
<td>311</td>
<td>50.7</td>
<td>311</td>
<td>50.3</td>
<td>313</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SPECspeed®2017_fp_base = 194</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SPECspeed®2017_fp_peak = 195</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

General Notes

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

LD_LIBRARY_PATH = "/home/cpu2017/lib/intel64:/home/cpu2017/lib/ia32:/home/cpu2017/je5.0.1-32"

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>
```

Platform Notes

BIOS settings:
ADDDC setting disabled

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

**Dell Inc.**

PowerEdge MX840c (Intel Xeon Gold 6248, 2.50GHz)

<table>
<thead>
<tr>
<th>SPECspeed®2017_fp_peak = 195</th>
<th>SPECspeed®2017_fp_base = 194</th>
</tr>
</thead>
</table>

**CPU2017 License:** 55  
**Test Sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test Date:** Jul-2019  
**Hardware Availability:** Apr-2019  
**Software Availability:** May-2019

---

**Platform Notes (Continued)**

Sub NUMA Cluster disabled  
Virtualization Technology disabled  
DCU Streamer Prefetcher 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 disabled  
Logical Processor disabled  
CPU Interconnect Bus Link Power Management disabled  
PCI ASPM L1 Link Power Management disabled  
Sysinfo program /home/cpu2017/bin/sysinfo  
Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9  
running on intel-sut Thu Aug 1 18:01:41 2019

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 6248 CPU @ 2.50GHz  
  - 4 "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 : 20

- physical 0: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28  
- physical 1: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28  
- physical 2: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28  
- physical 3: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28

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:** 1  
- **Core(s) per socket:** 20  
- **Socket(s):** 4  
- **NUMA node(s):** 4  
- **Vendor ID:** GenuineIntel  
- **CPU family:** 6  
- **Model:** 85

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

**Dell Inc.**

**PowerEdge MX840c (Intel Xeon Gold 6248, 2.50GHz)**

<table>
<thead>
<tr>
<th>SPECspeed®2017_fp_base</th>
<th>194</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_fp_peak</td>
<td>195</td>
</tr>
</tbody>
</table>

**CPU2017 License:** 55  
**Test Sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test Date:** Jul-2019  
**Hardware Availability:** Apr-2019  
**Software Availability:** May-2019

### Platform Notes (Continued)

- **Model name:** Intel(R) Xeon(R) Gold 6248 CPU @ 2.50GHz  
- **Stepping:** 6  
- **CPU MHz:** 1433.618  
- **BogoMIPS:** 5000.00  
- **Virtualization:** VT-x  
- **L1d cache:** 32K  
- **L1i cache:** 32K  
- **L2 cache:** 1024K  
- **L3 cache:** 28160K  
- **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 pdpes rdtscp lm constant_tsc art arch_perfmon pbe ts bs 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 aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault ebp cat_l3 cdp_l3 invpcid_single intel_pni ssbd ibrs ibpb stibp ibrs_enhanced tpr_shadow vmi flexpriority ept vpd fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 3dnow invpcid rtm cqm mxp rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbb_total cqm_mbb_local dtherm ida arat pin pts pku ospke avx512_vnni flush_l1d arch_capabilities

/proc/cpuinfo cache data  
```  
*cache size : 28160 KB*
```

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: 191914 MB  
node 0 free: 190470 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: 193511 MB  
node 1 free: 189713 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: 193532 MB  
node 2 free: 190661 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: 193530 MB  
node 3 free: 191703 MB  
node distances:  
node 0 1 2 3  
0: 10 21 21 21  
1: 21 10 21 21  
```

(Continued on next page)
Dell Inc.

PowerEdge MX840c (Intel Xeon Gold 6248, 2.50GHz)

**SPEC CPU®2017 Floating Point Speed Result**

SPECspeed®2017_fp_base = 194

SPECspeed®2017_fp_peak = 195

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

Test Date: Jul-2019
Hardware Availability: Apr-2019
Software Availability: May-2019

---

**Platform Notes (Continued)**

```
2: 21 21 10 21
3: 21 21 21 10

From /proc/meminfo
MemTotal: 791028520 kB
HugePages_Total: 0
Hugepagesize: 2048 kB
```

```
/usr/bin/lsb_release -d
Ubuntu 18.04.2 LTS
```

```
From /etc/*release* /etc/*version*
debian_version: buster/sid
os-release:
    NAME="Ubuntu"
    VERSION="18.04.2 LTS (Bionic Beaver)"
    ID=ubuntu
    ID LIKE=debian
    PRETTY_NAME="Ubuntu 18.04.2 LTS"
    VERSION_ID="18.04"
    HOME_URL="https://www.ubuntu.com/"
    SUPPORT_URL="https://help.ubuntu.com/"
```

```
uname -a:
    Linux intel-sut 4.15.0-45-generic #48-Ubuntu SMP Tue Jan 29 16:28:13 UTC 2019 x86_64
ox86_64 x86_64 GNU/Linux
```

Kernel self-reported vulnerability status:

- CVE-2017-5754 (Meltdown): Not affected
- CVE-2017-5753 (Spectre variant 1): Mitigation: __user pointer sanitization
- CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB

run-level 3 Jul 31 13:44

SPEC is set to: /home/cpu2017
```
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 ext4 439G 37G 380G 9% /
```

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. 2.2.9 05/08/2019
- Memory:
  16x 00AD00B300AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933
  8x 00AD063200AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933
```
(Continued on next page)
SPEC CPU®2017 Floating Point Speed Result

Dell Inc.

PowerEdge MX840c (Intel Xeon Gold 6248, 2.50GHz)

SPECspeed®2017_fp_base = 194
SPECspeed®2017_fp_peak = 195

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

Test Date: Jul-2019
Hardware Availability: Apr-2019
Software Availability: May-2019

Platform Notes (Continued)

24x Not Specified Not Specified

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
| C | 619.lbm_s(base, peak) 638.imagick_s(base, peak) |
|   | 644.nab_s(base, peak) |
-----------------------------------------------------------------------------
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
-----------------------------------------------------------------------------
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
-----------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
-----------------------------------------------------------------------------
-----------------------------------------------------------------------------
Fortran | 603.bwaves_s(base, peak) 649.fotonik3d_s(base, peak) |
|   | 654.roms_s(base, peak) |
-----------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
-----------------------------------------------------------------------------
-----------------------------------------------------------------------------
Fortran, C | 621.wrf_s(base, peak) 627.cam4_s(base, peak) |
|   | 628.pop2_s(base, peak) |
-----------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Dell Inc.

PowerEdge MX840c (Intel Xeon Gold 6248, 2.50GHz)

**SPECspeed**

- **SPECspeed**\textsuperscript{2017}fp\textsubscript{peak} = 195
- **SPECspeed**\textsuperscript{2017}fp\textsubscript{base} = 194

| Test Date: | Jul-2019 |
| Hardware Availability: | Apr-2019 |
| Software Availability: | May-2019 |

### Compiler Version Notes (Continued)

Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

---

### Base Compiler Invocation

**C benchmarks:**

cce -m64 -std=c11

**Fortran benchmarks:**

ifort -m64

**Benchmarks using both Fortran and C:**

ifort -m64 icc -m64 -std=c11

**Benchmarks using Fortran, C, and C++:**

icpc -m64 icc -m64 -std=c11 ifort -m64

### Base Portability Flags

- 603.bwaves\textunderscore s: -DSPEC\_LP64
- 607.cactuBSSN\textunderscore s: -DSPEC\_LP64
- 619.lbm\textunderscore s: -DSPEC\_LP64
- 621.wrf\textunderscore s: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG -convert big\_ endian
- 627.cam4\textunderscore s: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG
- 628.pop2\textunderscore s: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG -convert big\_ endian
- -assume byte\_recl
- 638.imagick\textunderscore s: -DSPEC\_LP64
- 644.nab\textunderscore s: -DSPEC\_LP64
- 649.fotonik3d\textunderscore s: -DSPEC\_LP64
- 654.roms\textunderscore s: -DSPEC\_LP64

### Base Optimization Flags

**C benchmarks:**

-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC\_OPENMP

**Fortran benchmarks:**

-DSPEC\_OPENMP -xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp

(Continued on next page)
**Dell Inc.**

PowerEdge MX840c (Intel Xeon Gold 6248, 2.50GHz)

<table>
<thead>
<tr>
<th>SPECspeed°2017_fp_peak = 195</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed°2017_fp_base = 194</td>
</tr>
</tbody>
</table>

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.
Test Date: Jul-2019
Hardware Availability: Apr-2019
Software Availability: May-2019

**Base Optimization Flags (Continued)**

Fortran benchmarks (continued):
- nostandard-realloc-lhs

Benchmarks using both Fortran and C:
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC_OPENMP
-nostandard-realloc-lhs

Benchmarks using Fortran, C, and C++:
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC_OPENMP
-nostandard-realloc-lhs

**Peak Compiler Invocation**

C benchmarks:
icc -m64 -std=c11

Fortran benchmarks:
ifort -m64

Benchmarks using both Fortran and C:
ifort -m64 icc -m64 -std=c11

Benchmarks using Fortran, C, and C++:
icpc -m64 icc -m64 -std=c11 ifort -m64

**Peak Portability Flags**

Same as Base Portability Flags

**Peak Optimization Flags**

C benchmarks:
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC_OPENMP

Fortran benchmarks:

(Continued on next page)
Dell Inc.  
PowerEdge MX840c (Intel Xeon Gold 6248, 2.50GHz)

**SPECspeed®2017.fp_base = 194**

**SPECspeed®2017.fp_peak = 195**

| Test Date:  | Jul-2019 |
| Hardware Availability: | Apr-2019 |
| Software Availability: | May-2019 |

**CPU2017 License:** 55

**Test Sponsor:** Dell Inc.

**Tested by:** Dell Inc.

---

**Peak Optimization Flags (Continued)**

603.bwaves_s: 
-prof-gen(pass 1) -prof-use(pass 2) -DSPEC_SUPPRESS_OPENMP
-ffinite-math-only -no-prec-div -qopt-mem-layout-trans=4
-qopenmp -nstandard-realloc-lhs

649.fotonik3d_s: Same as 603.bwaves_s

654.roms_s: 
-DSPEC_OPENMP -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-prefetch -ffinite-math-only -qopt-mem-layout-trans=4
-qopenmp -nstandard-realloc-lhs

Benchmarks using both Fortran and C:

621.wrf_s: 
-prof-gen(pass 1) -prof-use(pass 2) -O2 -xCORE-AVX512
-qopt-prefetch -ipo -O3 -ffinite-math-only -no-prec-div
-qopt-mem-layout-trans=4 -DSPEC_SUPPRESS_OPENMP -qopenmp
-DSPEC_OPENMP -nstandard-realloc-lhs

627.cam4_s: 
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp
-DSPEC_OPENMP -nstandard-realloc-lhs

628.pop2_s: Same as 621.wrf_s

Benchmarks using Fortran, C, and C++:

-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC_OPENMP
-nstandard-realloc-lhs

---

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 v1.0.5 on 2019-08-01 14:01:41-0400.


Originally published on 2019-10-01.