## SPEC CPU®2017 Floating Point Speed Result

**Dell Inc.**

PowerEdge R650 (Intel Xeon Gold 5317, 3.00 GHz)

<table>
<thead>
<tr>
<th>SPECspeed®2017_fp_base</th>
<th>SPECspeed®2017_fp_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>132</td>
<td>135</td>
</tr>
</tbody>
</table>

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

![Graph showing SPEC CPU®2017 Floating Point results]

### Hardware

- **CPU Name:** Intel Xeon Gold 5317  
- **Max MHz:** 3600  
- **Nominal:** 3000  
- **Enabled:** 24 cores, 2 chips  
- **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:** 18 MB I+D on chip per chip  
- **Other:** None  
- **Memory:** 512 GB (16 x 32 GB 2Rx8 PC4-3200AA-R, running at 2933)  
- **Storage:** 225 GB on tmpfs  
- **Other:** None

### Software

- **OS:** Red Hat Enterprise Linux 8.3 (Ootpa)  
  4.18.0-240.15.1.el8_3.x86_64  
- **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;  
  C/C++: Version 2021.1 of Intel C/C++ Compiler  
  Classic Build 20201112 for Linux  
- **Parallel:** Yes  
- **Firmware:** Version 1.2.4 released May-2021  
- **File System:** tmpfs  
- **System State:** Run level 5 (graphical 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.
Dell Inc.

PowerEdge R650 (Intel Xeon Gold 5317, 3.00 GHz)

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

SPECspeed®2017_fp_base = 132
SPECspeed®2017_fp_peak = 135

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>603.bwaves_s</td>
<td>24</td>
<td>119</td>
<td>498</td>
<td>118</td>
<td>501</td>
<td>118</td>
<td>502</td>
</tr>
<tr>
<td>607.cactuBSSN_s</td>
<td>24</td>
<td>102</td>
<td>163</td>
<td>103</td>
<td>162</td>
<td>106</td>
<td>157</td>
</tr>
<tr>
<td>619.lbm_s</td>
<td>24</td>
<td>50.0</td>
<td>105</td>
<td>50.1</td>
<td>105</td>
<td>49.9</td>
<td>105</td>
</tr>
<tr>
<td>621.wrf_s</td>
<td>24</td>
<td>106</td>
<td>125</td>
<td>106</td>
<td>125</td>
<td>105</td>
<td>126</td>
</tr>
<tr>
<td>627.cam4_s</td>
<td>24</td>
<td>107</td>
<td>82.9</td>
<td>107</td>
<td>83.0</td>
<td>108</td>
<td>82.3</td>
</tr>
<tr>
<td>628.pop2_s</td>
<td>24</td>
<td>156</td>
<td>76.2</td>
<td>155</td>
<td>76.5</td>
<td>154</td>
<td>77.0</td>
</tr>
<tr>
<td>638.imagick_s</td>
<td>24</td>
<td>147</td>
<td>98.3</td>
<td>147</td>
<td>98.4</td>
<td>147</td>
<td>98.4</td>
</tr>
<tr>
<td>644.nab_s</td>
<td>24</td>
<td>86.7</td>
<td>202</td>
<td>86.5</td>
<td>202</td>
<td>86.7</td>
<td>202</td>
</tr>
<tr>
<td>649.fotonik3d_s</td>
<td>24</td>
<td>95.7</td>
<td>95.2</td>
<td>94.5</td>
<td>96.4</td>
<td>94.1</td>
<td>96.9</td>
</tr>
<tr>
<td>654.roms_s</td>
<td>24</td>
<td>124</td>
<td>127</td>
<td>124</td>
<td>127</td>
<td>124</td>
<td>127</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,compact"
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 Floating Point Speed Result**

Dell Inc.  
PowerEdge R650 (Intel Xeon Gold 5317, 3.00 GHz)

<table>
<thead>
<tr>
<th>SPECspeed®2017_fp_base</th>
<th>132</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_fp_peak</td>
<td>135</td>
</tr>
</tbody>
</table>

<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>

**Test Date:** Jun-2021  
**Hardware Availability:** Jun-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

<table>
<thead>
<tr>
<th>System Profile</th>
<th>Custom</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Power Management</td>
<td>Maximum Performance</td>
</tr>
<tr>
<td>C1E</td>
<td>Disabled</td>
</tr>
<tr>
<td>C States</td>
<td>Autonomous</td>
</tr>
<tr>
<td>Memory Patrol Scrub</td>
<td>Disabled</td>
</tr>
<tr>
<td>Energy Efficiency Policy</td>
<td>Performance</td>
</tr>
<tr>
<td>CPU Interconnect Bus Link</td>
<td>Power Management : Disabled</td>
</tr>
</tbody>
</table>

Sysinfo program /mnt/ramdisk/cpu2017-1.1.5-ic2021.1/bin/sysinfo  
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c  
running on localhost.localdomain Fri Jun 4 06:59:01 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 5317 CPU @ 3.00GHz
- 2 "physical id"s (chips)
- 24 "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 : 12
  - siblings : 12
  - physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11
  - physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11

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

---

(Continued on next page)
Dell Inc.

PowerEdge R650 (Intel Xeon Gold 5317, 3.00 GHz)

SPEC CPU®2017 Floating Point Speed Result

SPECscale®2017_fp_base = 132
SPECscale®2017_fp_peak = 135

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

Test Date: Jun-2021
Hardware Availability: Jun-2021
Software Availability: Feb-2021

SPECspeed®2017_fp_peak = 135

CPU(s): 24
On-line CPU(s) list: 0-23
Thread(s) per core: 1
Core(s) per socket: 12
Socket(s): 2
NUMA node(s): 2
Vendor ID: GenuineIntel
CPU family: 6
Model: 106
Model name: Intel(R) Xeon(R) Gold 5317 CPU @ 3.00GHz
Stepping: 6
CPU MHz: 3375.201
BogoMIPS: 6000.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 1280K
L3 cache: 18432K
NUMA node0 CPU(s): 0,2,4,6,8,10,12,14,16,18,20,22
NUMA node1 CPU(s): 1,3,5,7,9,11,13,15,17,19,21,23
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
aperfmrperf pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16
 xtpr pdcm pcid dcasse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave
 avx f16c rdrand lahf_lm abmahm 3dnowprefetch cpuid_fault epb cat_l3 invpcid_single
 intel_puin ssbd mba ibrs ibpb stibp ibrs_enhanced fsgsbase tsc_adjust bmi1 hle avx2
 smep bmi2 erms invpcid cqm cmq rdt_a avx512f avx512dq rdseed adx smap avx512ifma
 clflushopt clwb intel_pt avx512cd sha ni avx512bw avx512vl xsavesopt xsave xgetbv1
 xsaveopt cqm cqm_occup llc cqm_mbm_total cqm_mbm_local split_lock_detect wbinvd
 dtherm ida arat pln pts avx512vmbi umip pku ospke avx512_vmbi2 gfni vaes vclmu1qdq
 avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid md_clear pconfig flush_lld
 arch_capabilities

/proc/cpuinfo cache data

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
node 0 size: 252749 MB
node 0 free: 254533 MB
node 1 cpus: 1 3 5 7 9 11 13 15 17 19 21 23
node 1 size: 253324 MB
node 1 free: 237595 MB
node distances:

(Continued on next page)
Dell Inc.

PowerEdge R650 (Intel Xeon Gold 5317, 3.00 GHz)

SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017_fp_base = 132

SPECspeed®2017_fp_peak = 135

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

Platform Notes (Continued)

node 0  1
0: 10  20
1: 20  10

From /proc/meminfo
MemTotal: 527817296 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): Mitigation: Speculative Store Bypass disabled via prctl and seccomp
CVE-2018-3639 (Speculative Store Bypass): Mitigation: usercopy/swapsgs barriers and __user pointer sanitization
CVE-2017-5753 (Spectre variant 1): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling
CVE-2017-5715 (Spectre variant 2): Not affected
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

(Continued on next page)
SPEC CPU®2017 Floating Point Speed Result
Copyright 2017-2021 Standard Performance Evaluation Corporation

Dell Inc.
PowerEdge R650 (Intel Xeon Gold 5317, 3.00 GHz)

SPECspeed®2017_fp_base = 132
SPECspeed®2017_fp_peak = 135

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

Platform Notes (Continued)

run-level 5 Jun 4 02:57
SPEC is set to: /mnt/ramdisk/cpu2017-1.1.5-ic2021.1
Filesystem Type Size Used Avail Use% Mounted on
tmpfs tmpfs 225G 13G 213G 6% /mnt/ramdisk

From /sys/devices/virtual/dmi/id
Vendor: Dell Inc.
Product: PowerEdge R650
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:
7x 00AD00B300AD HMAA4GR7AJR8N-XN 32 GB 2 rank 3200, configured at 2933
9x 00AD063200AD HMAA4GR7AJR8N-XN 32 GB 2 rank 3200, configured at 2933
16x Not Specified Not Specified

BIOS:
BIOS Vendor: Dell Inc.
BIOS Version: 1.2.4
BIOS Date: 05/28/2021
BIOS Revision: 1.2

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
C | 619.lbm_s(base, peak) 638.imagick_s(base, peak)
644.nab_s(base)
==============================================================================
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.
==============================================================================
C | 644.nab_s(peak)
==============================================================================
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Dell Inc. PowerEdge R650 (Intel Xeon Gold 5317, 3.00 GHz)

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

Copyright 2017-2021 Standard Performance Evaluation Corporation

---

**Compiler Version Notes (Continued)**

---

```plaintext
C               | 619.lbm_s(base, peak) 638.imagick_s(base, peak) 644.nab_s(base)
               |
               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.

---

C               | 644.nab_s(peak)
               Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113
               Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

---

C++, C, Fortran | 607.cactuBSSN_s(base, 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.
               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.
               Intel(R) Fortran 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.

---

Fortran         | 603.bwaves_s(base, peak) 649.fotonik3d_s(base, peak) 654.roms_s(base, peak)
               Intel(R) Fortran 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.

---

Fortran, C      | 621.wrf_s(base, peak) 627.cam4_s(base, peak) 628.pop2_s(base, peak)
               Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on
```

(Continued on next page)
Dell Inc.
PowerEdge R650 (Intel Xeon Gold 5317, 3.00 GHz)  

SPECspeed®2017_fp_base = 132
SPECspeed®2017_fp_peak = 135

Compiler Version Notes (Continued)

Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
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.

Base Compiler Invocation

C benchmarks:
icc
Fortran benchmarks:
ifort
Benchmarks using both Fortran and C:
ifort icc
Benchmarks using Fortran, C, and C++:
icpc icc ifort

Base Portability Flags

603.bwaves_s: -DSPEC_LP64
607.cactuBSSN_s: -DSPEC_LP64
619.lbm_s: -DSPEC_LP64
621.wrf_s: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
627.cam4_s: -DSPEC_LP64 -DSPEC_CASE_FLAG
628.pop2_s: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
   -assume byterecl
638.imagick_s: -DSPEC_LP64
644.nab_s: -DSPEC_LP64
649.fotonik3d_s: -DSPEC_LP64
654.roms_s: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
   -m64 -std=c11 -xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
   -ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC_OPENMP
   -mbranches-within-32B-boundaries

(Continued on next page)
Dell Inc. PowerEdge R650 (Intel Xeon Gold 5317, 3.00 GHz)

| SPECspeed®2017_fp_base = 132 |
| SPECspeed®2017_fp_peak = 135 |

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

**Base Optimization Flags (Continued)**

Fortran benchmarks:
- `-m64` -Wl,-z,muldefs -DSPEC_OPENMP -xCORE-AVX512 -ipo -O3
- `-no-prec-div` -qopt-prefetch -ffinite-math-only
- `-qopt-mem-layout-trans=4` -qopenmp -nostandard-realloc-lhs
- `-mbranches-within-32B-boundaries` `-L/usr/local/jemalloc64-5.0.1/lib`
- `-ljemalloc`

Benchmarks using both Fortran and C:
- `-m64` `-std=c11` -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
- `-qopt-prefetch` `-ffinite-math-only` `-qopt-mem-layout-trans=4` `-qopenmp`
- `-DSPEC_OPENMP` `-mbranches-within-32B-boundaries` `-nostandard-realloc-lhs`
- `-L/usr/local/jemalloc64-5.0.1/lib` `-ljemalloc`

Benchmarks using Fortran, C, and C++:
- `-m64` `-std=c11` -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
- `-qopt-prefetch` `-ffinite-math-only` `-qopt-mem-layout-trans=4` `-qopenmp`
- `-DSPEC_OPENMP` `-mbranches-within-32B-boundaries` `-nostandard-realloc-lhs`
- `-L/usr/local/jemalloc64-5.0.1/lib` `-ljemalloc`

**Peak Compiler Invocation**

C benchmarks (except as noted below):
- `icc`
- `644.nab_s: icx`

Fortran benchmarks:
- `ifort`

Benchmarks using both Fortran and C:
- `ifort icc`

Benchmarks using Fortran, C, and C++:
- `icpc icc ifort`

**Peak Portability Flags**

Same as Base Portability Flags
Dell Inc. PowerEdge R650 (Intel Xeon Gold 5317, 3.00 GHz)

SPECspeed®2017_fp_base = 132
SPECspeed®2017_fp_peak = 135

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

Peak Optimization Flags

C benchmarks:

619.lbm_s: basepeak = yes

638.imagick_s: basepeak = yes

644.nab_s: -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-ftlo -mfpmath=sse -funroll-loops -fiopenmp
-DSPEC_OPENMP -qopt-mem-layout-trans=4
-fimf-accuracy-bits=14:sqrt
-mbranches-within-32B-boundaries
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Fortran benchmarks:

603.bwaves_s: basepeak = yes

649.fotonik3d_s: -m64 -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2)
-DSPEC_SUPPRESS_OPENMP -DSPEC_OPENMP -ipo -xCORE-AVX512
-O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4 -qopenmp -nostandard-realloc-lhs
-mbranches-within-32B-boundaries
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

654.roms_s: basepeak = yes

Benchmarks using both Fortran and C:

621.wrf_s: -m64 -std=c11 -Wl,-z,muldefs -prof-gen(pass 1)
-qopt-use(pass 2) -ipo -xCORE-AVX512 -O3 -no-prec-div
-qopt-prefetch -ffinite-math-only -qopt-mem-layout-trans=4
-DSPEC_SUPPRESS_OPENMP -qopenmp -DSPEC_OPENMP
-mbranches-within-32B-boundaries -nostandard-realloc-lhs
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

627.cam4_s: basepeak = yes

628.pop2_s: basepeak = yes

Benchmarks using Fortran, C, and C++:

607.cactusBSSN_s: basepeak = yes
## SPEC CPU®2017 Floating Point Speed Result

### Dell Inc.

**PowerEdge R650 (Intel Xeon Gold 5317, 3.00 GHz)**

<table>
<thead>
<tr>
<th>SPECspeed®2017_fp_base</th>
<th>SPECspeed®2017_fp_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>= 132</td>
<td>= 135</td>
</tr>
</tbody>
</table>

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

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 v1.1.5 on 2021-06-04 07:59:00-0400.
Originally published on 2021-07-06.