### SPEC CPU®2017 Floating Point Speed Result

**Dell Inc.**

PowerEdge XR11 (Intel Xeon Gold 5318Y, 2.10 GHz)

<table>
<thead>
<tr>
<th>Software</th>
<th>Dell Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SPECspeed®2017_fp_base</strong> = 108</td>
<td><strong>SPECspeed®2017_fp_peak</strong> = 110</td>
</tr>
</tbody>
</table>

**Test Sponsor:** Dell Inc.

**Test Date:** May-2021

**Hardware Availability:** Jul-2021

**Tested by:** Dell Inc.

**Software Availability:** Feb-2021

### Hardware

| Threads | 0 | 15.0 | 30.0 | 45.0 | 60.0 | 75.0 | 90.0 | 105 | 120 | 135 | 150 | 165 | 180 | 195 | 210 | 225 | 240 | 255 | 270 | 285 | 300 | 315 | 330 | 345 | 360 |
| 603.bwaves_s | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 607.cactuBSSN_s | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 619.lbm_s | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 621.wrf_s | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 627.cam4_s | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 628.pop2_s | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 638.imagick_s | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 644.nab_s | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 649.fotonik3d_s | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 654.roms_s | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**CPU2017 License:** 55

**Test Date:** May-2021

**Hardware Availability:** Jul-2021

**Test Sponsor:** Dell Inc.

**Tested by:** Dell Inc.

**Software Availability:** Feb-2021

### 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 0.9.0 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.

### Hardware

- **CPU Name:** Intel Xeon Gold 5318Y
- **Max MHz:** 3400
- **Nominal:** 2100
- **Enabled:** 24 cores, 1 chip
- **Orderable:** 1 chip
- **Cache L1:** 32 KB I + 48 KB D on chip per core
- **L2:** 1.25 MB I+D on chip per core
- **L3:** 36 MB I+D on chip per chip
- **Other:** None
- **Memory:** 512 GB (8 x 64 GB 2Rx4 PC4-3200AA-R, running at 2933)
- **Storage:** 225 GB on tmpfs
- **Other:** None
Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base Threads</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Peak Threads</th>
<th>Peak Seconds</th>
<th>Peak Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>603.bwaves_s</td>
<td>24</td>
<td>172</td>
<td>344</td>
<td>24</td>
<td>171</td>
<td>345</td>
</tr>
<tr>
<td>607.cactuBSSN_s</td>
<td>24</td>
<td>116</td>
<td>143</td>
<td>24</td>
<td>117</td>
<td>143</td>
</tr>
<tr>
<td>619.lbm_s</td>
<td>24</td>
<td>72.8</td>
<td>72.0</td>
<td>24</td>
<td>73.7</td>
<td>72.6</td>
</tr>
<tr>
<td>621.wrf_s</td>
<td>24</td>
<td>112</td>
<td>118</td>
<td>24</td>
<td>100</td>
<td>132</td>
</tr>
<tr>
<td>627.cam4_s</td>
<td>24</td>
<td>126</td>
<td>70.2</td>
<td>24</td>
<td>126</td>
<td>70.2</td>
</tr>
<tr>
<td>628.pop2_s</td>
<td>24</td>
<td>142</td>
<td>83.3</td>
<td>24</td>
<td>142</td>
<td>83.3</td>
</tr>
<tr>
<td>638.imagick_s</td>
<td>24</td>
<td>182</td>
<td>79.4</td>
<td>24</td>
<td>182</td>
<td>79.4</td>
</tr>
<tr>
<td>644.nab_s</td>
<td>24</td>
<td>108</td>
<td>162</td>
<td>24</td>
<td>98.3</td>
<td>178</td>
</tr>
<tr>
<td>649.fotonik3d_s</td>
<td>24</td>
<td>137</td>
<td>66.7</td>
<td>24</td>
<td>137</td>
<td>66.7</td>
</tr>
<tr>
<td>654.roms_s</td>
<td>24</td>
<td>159</td>
<td>98.8</td>
<td>24</td>
<td>159</td>
<td>98.8</td>
</tr>
</tbody>
</table>

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"
MALLOCC_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
ejemalloc, 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.
SPEC CPU®2017 Floating Point Speed Result

Dell Inc.

PowerEdge XR11 (Intel Xeon Gold 5318Y, 2.10 GHz)

SPECspeed®2017_fp_base = 108
SPECspeed®2017_fp_peak = 110

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

Test Date: May-2021
Hardware Availability: Jul-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
   C1E : Disabled
   C States : Autonomous
   Memory Patrol Scrub : Disabled
   Energy Efficiency Policy : Performance
   CPU Interconnect Bus Link
      Power Management : Disabled

Sysinfo program /mnt/ramdisk/cpu2017-1.1.5-ic2021.1/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b8e2f1c
running on localhost.localdomain Mon May 17 02:51:37 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 5318Y CPU @ 2.10GHz
   1 "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 : 24
   siblings : 24
   physical 0: cores 0 1 10 11 12 13 14 15 16 17 18 19 20 21 22 23

From lscpu:
   Architecture: x86_64
   CPU op-mode(s): 32-bit, 64-bit
   Byte Order: Little Endian
   CPU(s): 24

(Continued on next page)
Dell Inc.

PowerEdge XR11 (Intel Xeon Gold 5318Y, 2.10 GHz)

**SPEC**

**SPEC CPU**

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

**Copyright 2017-2021 Standard Performance Evaluation Corporation**

---

### SPECspeed®2017_fp_base = 108

### SPECspeed®2017_fp_peak = 110

---

#### Dell Inc.

PowerEdge XR11 (Intel Xeon Gold 5318Y, 2.10 GHz)

**CPU2017 License:** 55

**Test Sponsor:** Dell Inc.

**Test Date:** May-2021

**Tested by:** Dell Inc.

**Hardware Availability:** Jul-2021

**Software Availability:** Feb-2021

---

### Platform Notes (Continued)

On-line CPU(s) list: 0-23

Thread(s) per core: 1

Core(s) per socket: 24

Socket(s): 1

NUMA node(s): 1

Vendor ID: GenuineIntel

CPU family: 6

Model: 106

Model name: Intel(R) Xeon(R) Gold 5318Y CPU @ 2.10GHz

Stepping: 6

CPU MHz: 2664.531

BogoMIPS: 4200.00

Virtualization: VT-x

L1d cache: 48K

L1i cache: 32K

L2 cache: 1280K

L3 cache: 36864K

NUMA node0 CPU(s): 0-23

Flags: fpu vme de pse tsc msr pae mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant_tsc 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 invpcid_single intel_pinn ssbd mba ibrs ibpb stibp ibrs_enhanced fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2  invpcid cqm rdt_a smap avx2sf smep bmi2 erms invpcid cqg rdt_a avx512f avx512dq rdseed adx smap avx512sfma clflushopt clwb intel_pt avx512cd sha ni avx512bw avx512vl xsaveopt xsave xsetbv1 xsaves cqmm llc cqmm_occup_llc cqmm螃mm_total cqmm_螃mm_local split_lock_detect wbnoinvd dtherm ida arat pln pts avx512vmbi umip pkp ospe avx512_vmbi2 gfni vaes vpcmldqd avx512_vnni avx512_bitalg tme avx512_vpopcntdq 1a57 rdpid md_clear pconfig flush_l1d arch_capabilities

/proc/cpuinfo cache data

cache size : 36864 KB

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a physical chip.

available: 1 nodes (0)

node 0 cpus: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

node 0 size: 490226 MB

node 0 free: 492176 MB

node distances:

node 0

0: 10

From /proc/meminfo

MemTotal: 527817248 KB

---

(Continued on next page)
Dell Inc. PowerEdge XR11 (Intel Xeon Gold 5318Y, 2.10 GHz)

<table>
<thead>
<tr>
<th>SPECspeed²017_fp_base</th>
<th>108</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed²017_fp_peak</td>
<td>110</td>
</tr>
</tbody>
</table>

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

### Platform Notes (Continued)

- **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
- **CVE-2017-5753 (Spectre variant 1)**: Mitigation: usercopy/swapsgs 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 May 16 22:40
```

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
```

(Continued on next page)
Dell Inc. PowerEdge XR11 (Intel Xeon Gold 5318Y, 2.10 GHz)

SPECspeed®2017_fp_base = 108
SPECspeed®2017_fp_peak = 110

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

Platform Notes (Continued)
From /sys/devices/virtual/dmi/id
Vendor:         Dell Inc.
Product:        PowerEdge XR11
Product Family: PowerEdge
Serial:         09900TO

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:
    1x 002C069D002C 36ASF8G72PZ-3G2B2 64 GB 2 rank 3200, configured at 2933
    7x 00AD069D00AD HMAA8GR7AJR4N-XN 64 GB 2 rank 3200, configured at 2933

BIOS:
    BIOS Vendor:       Dell Inc.
    BIOS Version:      0.9.0
    BIOS Date:         05/10/2021
    BIOS Revision:     0.9

(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.

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)
**Dell Inc.**

PowerEdge XR11 (Intel Xeon Gold 5318Y, 2.10 GHz)

<table>
<thead>
<tr>
<th>SPECspeed®2017_fp_base = 108</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_fp_peak = 110</td>
</tr>
</tbody>
</table>

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

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

---

**Compiler Version Notes (Continued)**

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  
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.
SPEC CPU®2017 Floating Point Speed Result

Dell Inc.

PowerEdge XR11 (Intel Xeon Gold 5318Y, 2.10 GHz)

SPECspeed®2017_fp_base = 108

SPECspeed®2017_fp_peak = 110

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

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

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 -gopenmp -DSPEC_OPENMP
-mbranches-within-32B-boundaries

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 -gopenmp -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

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

Dell Inc. 

PowerEdge XR11 (Intel Xeon Gold 5318Y, 2.10 GHz) 

SPECspeed®2017_fp_base = 108 
SPECspeed®2017_fp_peak = 110 

Dell Inc. 

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

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

Base Optimization Flags (Continued) 

Benchmarks using both Fortran and C (continued):
-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

Peak Optimization Flags

C benchmarks:
619.lbm_s: basepeak = yes 
638.imagick_s: basepeak = yes

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

**PowerEdge XR11 (Intel Xeon Gold 5318Y, 2.10 GHz)**

<table>
<thead>
<tr>
<th>SPECspeed®2017_fp_base</th>
<th>SPECspeed®2017_fp_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>108</td>
<td>110</td>
</tr>
</tbody>
</table>

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

---

### Peak Optimization Flags (Continued)

**Fortran benchmarks:**

```plaintext
644.nab_s: -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
   -flto -mfpmath=sse -funroll-loops -fopenmp
   -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
```

**Benchmarks using both Fortran and C:**

```plaintext
621.wrf_s: -m64 -std=c11 -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
```

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

```plaintext
627.cam4_s: basepeak = yes
628.pop2_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®2017 Floating Point Speed Result

<table>
<thead>
<tr>
<th>Dell Inc.</th>
<th>SPECspeed®2017_fp_base = 108</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerEdge XR11 (Intel Xeon Gold 5318Y, 2.10 GHz)</td>
<td>SPECspeed®2017_fp_peak = 110</td>
</tr>
</tbody>
</table>

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

---

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 2021-05-17 03:51:36-0400.
Originally published on 2021-07-06.