



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Dell Inc.

SPECrate®2017\_fp\_base = 41.1

PowerEdge T140 (Intel Xeon E-2278G, 3.40 GHz)

SPECrate®2017\_fp\_peak = 44.4

CPU2017 License: 55

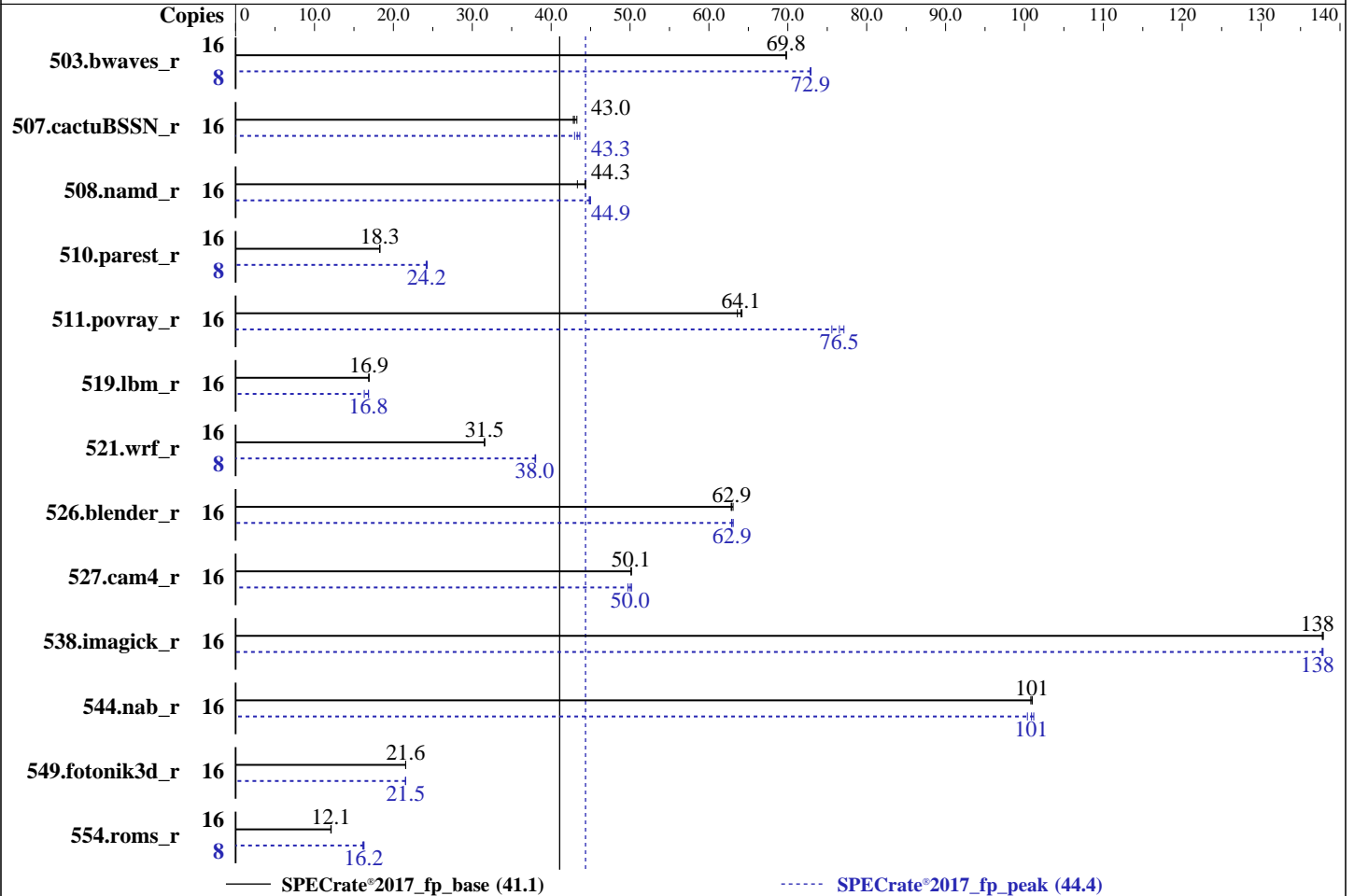
Test Date: Oct-2019

Test Sponsor: Dell Inc.

Hardware Availability: Dec-2019

Tested by: Dell Inc.

Software Availability: Jun-2019



### Hardware

CPU Name: Intel Xeon E-2278G  
 Max MHz: 5000  
 Nominal: 3400  
 Enabled: 8 cores, 1 chip, 2 threads/core  
 Orderable: 1 chip  
 Cache L1: 32 KB I + 32 KB D on chip per core  
 L2: 256 KB I+D on chip per core  
 L3: 16 MB I+D on chip per chip  
 Other: None  
 Memory: 64 GB (4 x 16 GB 2Rx8 PC4-2666V-R)  
 Storage: 1 x 960 GB SATA SSD  
 Other: None

### Software

OS: SUSE Linux Enterprise Server 15 SP1 kernel 4.12.14-195-default  
 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: No  
 Firmware: Version 2.1.3 released Nov-2019  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 64-bit  
 Other: None  
 Power Management: --



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 41.1

PowerEdge T140 (Intel Xeon E-2278G, 3.40 GHz)

SPECrate®2017\_fp\_peak = 44.4

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Oct-2019

Hardware Availability: Dec-2019

Software Availability: Jun-2019

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	16	2298	69.8	<b><u>2299</u></b>	<b><u>69.8</u></b>	2299	69.8	8	<b><u>1100</u></b>	<b><u>72.9</u></b>	1100	72.9	1101	72.8
507.cactuBSSN_r	16	468	43.3	<b><u>472</u></b>	<b><u>43.0</u></b>	473	42.8	16	<b><u>468</u></b>	<b><u>43.3</u></b>	464	43.6	471	43.0
508.namd_r	16	<b><u>343</u></b>	<b><u>44.3</u></b>	342	44.4	351	43.3	16	<b><u>339</u></b>	<b><u>44.9</u></b>	338	45.0	339	44.8
510.parest_r	16	2289	18.3	<b><u>2290</u></b>	<b><u>18.3</u></b>	2291	18.3	8	<b><u>865</u></b>	<b><u>24.2</u></b>	866	24.2	862	24.3
511.povray_r	16	587	63.6	<b><u>583</u></b>	<b><u>64.1</u></b>	582	64.2	16	494	75.6	484	77.1	<b><u>488</u></b>	<b><u>76.5</u></b>
519.lbm_r	16	<b><u>998</u></b>	<b><u>16.9</u></b>	998	16.9	998	16.9	16	1034	16.3	1001	16.8	<b><u>1001</u></b>	<b><u>16.8</u></b>
521.wrf_r	16	1135	31.6	<b><u>1136</u></b>	<b><u>31.5</u></b>	1136	31.5	8	471	38.0	<b><u>472</u></b>	<b><u>38.0</u></b>	472	38.0
526.blender_r	16	388	62.8	386	63.1	<b><u>387</u></b>	<b><u>62.9</u></b>	16	<b><u>387</u></b>	<b><u>62.9</u></b>	386	63.1	388	62.9
527.cam4_r	16	<b><u>558</u></b>	<b><u>50.1</u></b>	558	50.2	558	50.1	16	<b><u>559</u></b>	<b><u>50.0</u></b>	558	50.2	563	49.7
538.imagick_r	16	289	138	289	138	<b><u>289</u></b>	<b><u>138</u></b>	16	289	138	<b><u>289</u></b>	<b><u>138</u></b>	289	138
544.nab_r	16	267	101	267	101	<b><u>267</u></b>	<b><u>101</u></b>	16	266	101	<b><u>267</u></b>	<b><u>101</u></b>	268	100
549.fotonik3d_r	16	2893	21.6	<b><u>2892</u></b>	<b><u>21.6</u></b>	2891	21.6	16	2895	21.5	2893	21.6	<b><u>2894</u></b>	<b><u>21.5</u></b>
554.roms_r	16	2100	12.1	2107	12.1	<b><u>2100</u></b>	<b><u>12.1</u></b>	8	789	16.1	781	16.3	<b><u>782</u></b>	<b><u>16.2</u></b>

SPECrate®2017\_fp\_base = 41.1

SPECrate®2017\_fp\_peak = 44.4

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

## 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:  
LD\_LIBRARY\_PATH = "/home/cpu2017/ODM-SPECcpu2017-194/cpu2017/lib/intel64"

## General Notes

Binaries compiled on a system with 1x Intel Core i9-799X 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)

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 41.1

PowerEdge T140 (Intel Xeon E-2278G, 3.40 GHz)

SPECrate®2017\_fp\_peak = 44.4

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Oct-2019

Hardware Availability: Dec-2019

Software Availability: Jun-2019

## General Notes (Continued)

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:  
 Sub NUMA Cluster enabled  
 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 enabled  
 CPU Interconnect Bus Link Power Management enabled  
 PCI ASPM L1 Link Power Management enabled

Sysinfo program /home/cpu2017/ODM-SPECcpu2017-194/cpu2017/bin/sysinfo  
 Rev: r6365 of 2019-08-21 295195f888a3d7edble6e46a485a0011  
 running on linux-g3ob Tue Oct 22 19:08:14 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) E-2278G CPU @ 3.40GHz  
 1 "physical id"s (chips)  
 16 "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 : 8  
 siblings : 16  
 physical 0: cores 0 1 2 3 4 5 6 7

From lscpu:  
 Architecture: x86\_64  
 CPU op-mode(s): 32-bit, 64-bit

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 41.1

PowerEdge T140 (Intel Xeon E-2278G, 3.40 GHz)

SPECrate®2017\_fp\_peak = 44.4

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Oct-2019

Hardware Availability: Dec-2019

Software Availability: Jun-2019

## Platform Notes (Continued)

```

Byte Order:           Little Endian
Address sizes:       39 bits physical, 48 bits virtual
CPU(s):              16
On-line CPU(s) list: 0-15
Thread(s) per core: 2
Core(s) per socket: 8
Socket(s):           1
NUMA node(s):        1
Vendor ID:           GenuineIntel
CPU family:           6
Model:               158
Model name:          Intel(R) Xeon(R) E-2278G CPU @ 3.40GHz
Stepping:            13
CPU MHz:              3400.000
BogoMIPS:             6816.00
Virtualization:      VT-x
L1d cache:           32K
L1i cache:           32K
L2 cache:            256K
L3 cache:            16384K
NUMA node0 CPU(s):  0-15
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
aperfmpperf tsc_known_freq pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3
sdbg fma cx16 xtpr pdcm pcid sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer
aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb invpcid_single
ssbd ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid fsgsbase
tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm mpx rdseed adx smap clflushopt
intel_pt xsaveopt xsavec xgetbv1 xsaves dtherm ida arat pln pts md_clear flush_lld
arch_capabilities

```

```

/proc/cpuinfo cache data
cache size : 16384 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
node 0 size: 64131 MB
node 0 free: 62611 MB
node distances:
node    0
0:     10

```

```

From /proc/meminfo
MemTotal:      65670280 kB

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 41.1

PowerEdge T140 (Intel Xeon E-2278G, 3.40 GHz)

SPECrate®2017\_fp\_peak = 44.4

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Oct-2019

Hardware Availability: Dec-2019

Software Availability: Jun-2019

## Platform Notes (Continued)

HugePages\_Total: 0  
Hugepagesize: 2048 kB

From /etc/\*release\* /etc/\*version\*

```
os-release:
NAME="SLES"
VERSION="15-SP1"
VERSION_ID="15.1"
PRETTY_NAME="SUSE Linux Enterprise Server 15 SP1"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15:sp1"
```

uname -a:

```
Linux linux-g3ob 4.12.14-195-default #1 SMP Tue May 7 10:55:11 UTC 2019 (8fba516)
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: __user pointer sanitization
CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB: conditional,
RSB filling
```

run-level 3 Oct 22 10:18 last=5

SPEC is set to: /home/cpu2017/ODM-SPECcpu2017-194/cpu2017

```
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 xfs 440G 28G 413G 7% /
```

From /sys/devices/virtual/dmi/id

```
BIOS: Dell Inc. 2.1.3 09/27/2018
Vendor: Dell Inc.
Product: PowerEdge T140
Product Family: PowerEdge
```

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:

```
2x 00AD00000A02 HMA82GU7CJR8N-VK 16 GB 2 rank 2666
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 41.1

PowerEdge T140 (Intel Xeon E-2278G, 3.40 GHz)

SPECrate®2017\_fp\_peak = 44.4

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

Test Date: Oct-2019  
Hardware Availability: Dec-2019  
Software Availability: Jun-2019

## Platform Notes (Continued)

2x 00AD00000A07 HMA82GU7CJR8N-VK 16 GB 2 rank 2666

(End of data from sysinfo program)

## Compiler Version Notes

```
=====  
C | 519.lbm_r(base, peak) 538.imagick_r(base, peak)  
 | 544.nab_r(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.  
=====
```

```
=====  
C++ | 508.namd_r(base, peak) 510.parest_r(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.  
=====
```

```
=====  
C++, C | 511.povray_r(base, peak) 526.blender_r(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.  
=====
```

```
=====  
C++, C, Fortran | 507.cactuBSSN_r(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.  
=====
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 41.1

PowerEdge T140 (Intel Xeon E-2278G, 3.40 GHz)

SPECrate®2017\_fp\_peak = 44.4

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

Test Date: Oct-2019  
Hardware Availability: Dec-2019  
Software Availability: Jun-2019

## Compiler Version Notes (Continued)

```
=====
Fortran          | 503.bwaves_r(base, peak) 549.fotonik3d_r(base, peak)
                  | 554.roms_r(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       | 521.wrf_r(base, peak) 527.cam4_r(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,
Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
=====
```

## Base Compiler Invocation

C benchmarks:

```
icc -m64 -std=c11
```

C++ benchmarks:

```
icpc -m64
```

Fortran benchmarks:

```
ifort -m64
```

Benchmarks using both Fortran and C:

```
ifort -m64 icc -m64 -std=c11
```

Benchmarks using both C and C++:

```
icpc -m64 icc -m64 -std=c11
```

Benchmarks using Fortran, C, and C++:

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



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 41.1

PowerEdge T140 (Intel Xeon E-2278G, 3.40 GHz)

SPECrate®2017\_fp\_peak = 44.4

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Oct-2019

Hardware Availability: Dec-2019

Software Availability: Jun-2019

## Base Portability Flags

```
503.bwaves_r: -DSPEC_LP64
507.cactuBSSN_r: -DSPEC_LP64
508.namd_r: -DSPEC_LP64
510.parest_r: -DSPEC_LP64
511.povray_r: -DSPEC_LP64
519.lbm_r: -DSPEC_LP64
521.wrf_r: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
526.blender_r: -DSPEC_LP64 -DSPEC_LINUX -funsigned-char
527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG
538.imagick_r: -DSPEC_LP64
544.nab_r: -DSPEC_LP64
549.fotonik3d_r: -DSPEC_LP64
554.roms_r: -DSPEC_LP64
```

## Base Optimization Flags

C benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4
```

C++ benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4
```

Fortran benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4 -auto -nostandard-realloc-lhs
-align array32byte
```

Benchmarks using both Fortran and C:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4 -auto -nostandard-realloc-lhs
-align array32byte
```

Benchmarks using both C and C++:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4
```

Benchmarks using Fortran, C, and C++:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4 -auto -nostandard-realloc-lhs
-align array32byte
```





# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 41.1

PowerEdge T140 (Intel Xeon E-2278G, 3.40 GHz)

SPECrate®2017\_fp\_peak = 44.4

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Oct-2019

Hardware Availability: Dec-2019

Software Availability: Jun-2019

## Peak Compiler Invocation

C benchmarks:

```
icc -m64 -std=c11
```

C++ benchmarks:

```
icpc -m64
```

Fortran benchmarks:

```
ifort -m64
```

Benchmarks using both Fortran and C:

```
ifort -m64 icc -m64 -std=c11
```

Benchmarks using both C and C++:

```
icpc -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:

```
519.lbm_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3
-no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4
```

```
538.imagick_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=4
```

544.nab\_r: Same as 538.imagick\_r

C++ benchmarks:

```
508.namd_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3
-no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 41.1

PowerEdge T140 (Intel Xeon E-2278G, 3.40 GHz)

SPECrate®2017\_fp\_peak = 44.4

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Oct-2019

Hardware Availability: Dec-2019

Software Availability: Jun-2019

## Peak Optimization Flags (Continued)

510.parest\_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4

Fortran benchmarks:

503.bwaves\_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4 -auto  
-nostandard-realloc-lhs -align array32byte

549.fotonik3d\_r: Same as 503.bwaves\_r

554.roms\_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=4 -auto -nostandard-realloc-lhs  
-align array32byte

Benchmarks using both Fortran and C:

-prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=4 -auto -nostandard-realloc-lhs  
-align array32byte

Benchmarks using both C and C++:

511.povray\_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=4

526.blender\_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4

Benchmarks using Fortran, C, and C++:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=4 -auto -nostandard-realloc-lhs  
-align array32byte

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/Intel-ic19.0u1-official-linux64.2019-07-09.html>

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-revE6.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/Intel-ic19.0u1-official-linux64.2019-07-09.xml>

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-revE6.xml>



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 41.1

PowerEdge T140 (Intel Xeon E-2278G, 3.40 GHz)

SPECrate®2017\_fp\_peak = 44.4

**CPU2017 License:** 55

**Test Sponsor:** Dell Inc.

**Tested by:** Dell Inc.

**Test Date:** Oct-2019

**Hardware Availability:** Dec-2019

**Software Availability:** Jun-2019

SPEC CPU and SPECrate 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](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.0 on 2019-10-22 19:08:14-0400.

Report generated on 2019-11-26 12:54:50 by CPU2017 PDF formatter v6255.

Originally published on 2019-11-26.