



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Dell Inc.

### SPECrate®2017\_fp\_base = 129

### PowerEdge T440 (Intel Xeon Silver 4214, 2.20 GHz)

### SPECrate®2017\_fp\_peak = 137

CPU2017 License: 55

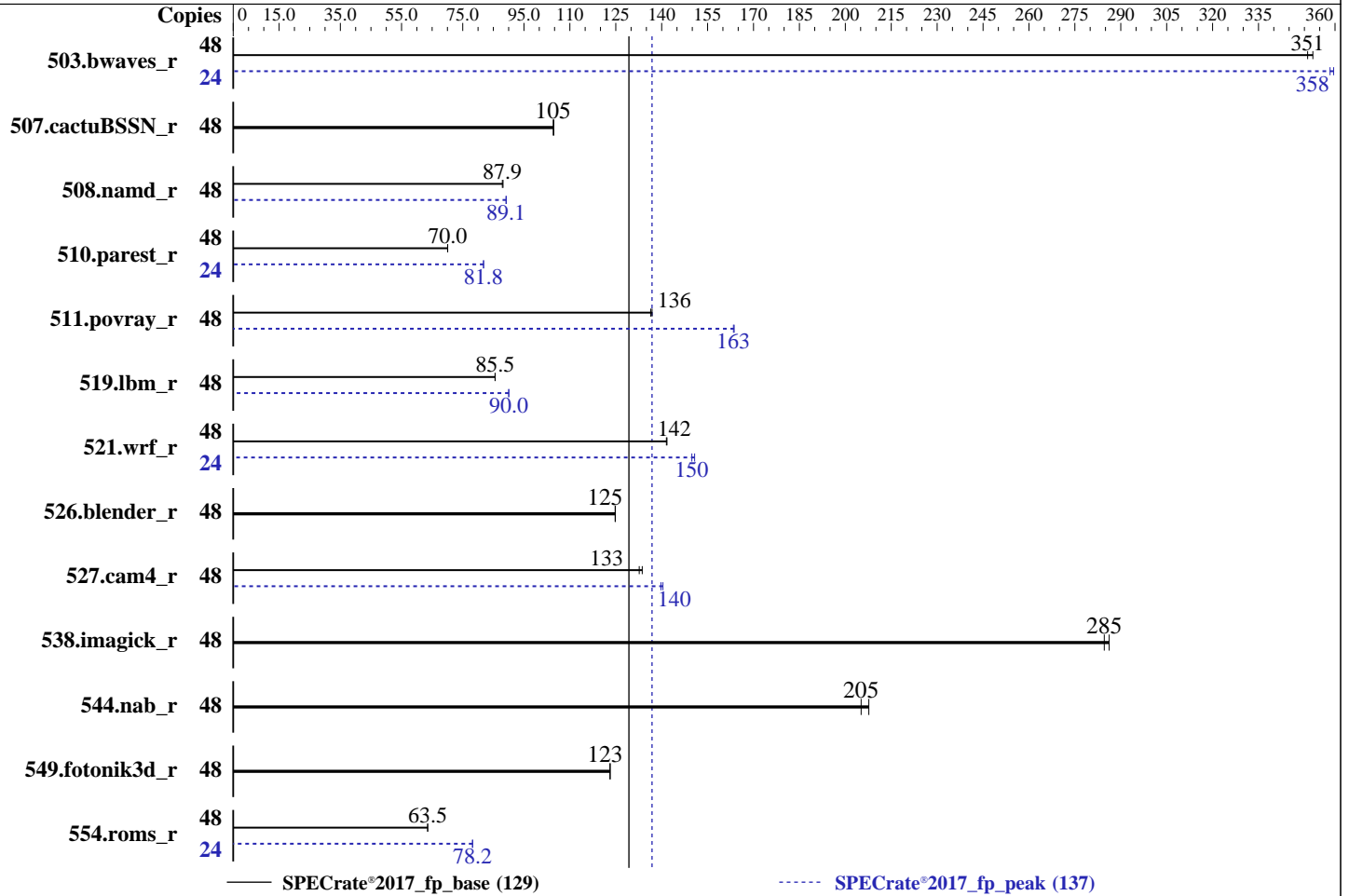
Test Date: Apr-2020

Test Sponsor: Dell Inc.

Hardware Availability: Feb-2020

Tested by: Dell Inc.

Software Availability: Nov-2019



#### Hardware

CPU Name: Intel Xeon Silver 4214  
 Max MHz: 3200  
 Nominal: 2200  
 Enabled: 48 cores, 2 chips  
 Orderable: 1,2 chips  
 Cache L1: 32 KB I + 32 KB D on chip per core  
 L2: 1 MB I+D on chip per core  
 L3: 16.5 MB I+D on chip per chip  
 Other: None  
 Memory: 384 GB (12 x 32 GB 2Rx8 PC4-2933V-R, running at 2933)  
 Storage: 1 x 1.92 TB SATA SSD  
 Other: None

#### Software

OS: Red Hat Enterprise Linux 8.1  
 kernel 4.18.0-147.el8.x86\_64  
 Compiler: C/C++: Version 19.0.5.281 of Intel C/C++ Compiler for Linux;  
 Fortran: Version 19.0.5.281 of Intel Fortran Compiler for Linux  
 Parallel: No  
 Firmware: Version 2.5.4 released Jan-2020  
 File System: tmpfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 64-bit  
 Other: None  
 Power Management: BIOS set to prefer performance at the cost of additional power usage.



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 129

PowerEdge T440 (Intel Xeon Silver 4214, 2.20 GHz)

SPECrate®2017\_fp\_peak = 137

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

Test Date: Apr-2020  
Hardware Availability: Feb-2020  
Software Availability: Nov-2019

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	48	1365	353	<u>1371</u>	<u>351</u>			24	<u>672</u>	<u>358</u>	669	360		
507.cactuBSSN_r	48	580	105	<u>581</u>	<u>105</u>			48	580	105	<u>581</u>	<u>105</u>		
508.namd_r	48	<u>519</u>	<u>87.9</u>	517	88.2			48	<u>512</u>	<u>89.1</u>	511	89.2		
510.parest_r	48	1792	70.1	<u>1793</u>	<u>70.0</u>			24	767	81.8	<u>768</u>	<u>81.8</u>		
511.povray_r	48	<u>822</u>	<u>136</u>	819	137			48	<u>686</u>	<u>163</u>	685	164		
519.lbm_r	48	<u>591</u>	<u>85.5</u>	591	85.6			48	562	90.0	<u>562</u>	<u>90.0</u>		
521.wrf_r	48	<u>760</u>	<u>142</u>	759	142			24	357	151	<u>359</u>	<u>150</u>		
526.blender_r	48	<u>586</u>	<u>125</u>	585	125			48	<u>586</u>	<u>125</u>	585	125		
527.cam4_r	48	628	134	<u>633</u>	<u>133</u>			48	598	140	<u>601</u>	<u>140</u>		
538.imagick_r	48	<u>419</u>	<u>285</u>	417	286			48	<u>419</u>	<u>285</u>	417	286		
544.nab_r	48	<u>394</u>	<u>205</u>	389	208			48	<u>394</u>	<u>205</u>	389	208		
549.fotonik3d_r	48	1518	123	<u>1520</u>	<u>123</u>			48	1518	123	<u>1520</u>	<u>123</u>		
554.roms_r	48	<u>1200</u>	<u>63.5</u>	1200	63.5			24	488	78.2	<u>488</u>	<u>78.2</u>		

SPECrate®2017\_fp\_base = 129

SPECrate®2017\_fp\_peak = 137

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 = "/mnt/ramdisk/cpu2017/lib/intel64"  
MALLOCONF = "retain:true"

## General Notes

Binaries compiled on a system with 1x Intel Core i9-9900K CPU + 64GB RAM memory using Redhat Enterprise Linux 8.0  
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)

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 129

PowerEdge T440 (Intel Xeon Silver 4214, 2.20 GHz)

SPECrate®2017\_fp\_peak = 137

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2020

Hardware Availability: Feb-2020

Software Availability: Nov-2019

## General Notes (Continued)

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:  
 Sub NUMA Cluster enabled  
 Virtualization Technology 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  
 UPI Prefetch enabled  
 LLC Prefetch disabled  
 Dead Line LLC Alloc enabled  
 Directory AtoS disabled

Sysinfo program /mnt/ramdisk/cpu2017/bin/sysinfo  
 Rev: r6365 of 2019-08-21 295195f888a3d7edble6e46a485a0011  
 running on localhost.localdomain Wed Apr 15 22:13:25 2020

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) Silver 4214 CPU @ 2.20GHz
 2 "physical id"s (chips)
 48 "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  : 24

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 129

PowerEdge T440 (Intel Xeon Silver 4214, 2.20 GHz)

SPECrate®2017\_fp\_peak = 137

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2020

Hardware Availability: Feb-2020

Software Availability: Nov-2019

## Platform Notes (Continued)

physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13  
physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13

From lscpu:

```
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:            Little Endian
CPU(s):                48
On-line CPU(s) list:   0-47
Thread(s) per core:    2
Core(s) per socket:    12
Socket(s):             2
NUMA node(s):         4
Vendor ID:             GenuineIntel
CPU family:            6
Model:                 85
Model name:            Intel(R) Xeon(R) Silver 4214 CPU @ 2.20GHz
Stepping:              6
CPU MHz:               2852.917
CPU max MHz:           3200.0000
CPU min MHz:           1000.0000
BogoMIPS:              4400.00
Virtualization:        VT-x
L1d cache:             32K
L1i cache:             32K
L2 cache:              1024K
L3 cache:              16896K
NUMA node0 CPU(s):    0,4,8,12,16,20,24,28,32,36,40,44
NUMA node1 CPU(s):    1,5,9,13,17,21,25,29,33,37,41,45
NUMA node2 CPU(s):    2,6,10,14,18,22,26,30,34,38,42,46
NUMA node3 CPU(s):    3,7,11,15,19,23,27,31,35,39,43,47
```

```
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
xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave
avx fl6c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cdp_l3
invpcid_single intel_ppin ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi
flexpriority ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm
cqm mpx rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd
avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
cqm_mbm_local dtherm ida arat pln pts pku ospke avx512_vnni md_clear flush_l1d
arch_capabilities
```

```
/proc/cpuinfo cache data
cache size : 16896 KB
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 129

PowerEdge T440 (Intel Xeon Silver 4214, 2.20 GHz)

SPECrate®2017\_fp\_peak = 137

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2020

Hardware Availability: Feb-2020

Software Availability: Nov-2019

## Platform Notes (Continued)

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
node 0 size: 95282 MB
node 0 free: 87085 MB
node 1 cpus: 1 5 9 13 17 21 25 29 33 37 41 45
node 1 size: 96765 MB
node 1 free: 96278 MB
node 2 cpus: 2 6 10 14 18 22 26 30 34 38 42 46
node 2 size: 96765 MB
node 2 free: 96389 MB
node 3 cpus: 3 7 11 15 19 23 27 31 35 39 43 47
node 3 size: 96764 MB
node 3 free: 96319 MB
node distances:
node  0  1  2  3
  0: 10 21 11 21
  1: 21 10 21 11
  2: 11 21 10 21
  3: 21 11 21 10

```

```

From /proc/meminfo
MemTotal:      394831636 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

```

```

From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux"
VERSION="8.1 (Ootpa)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="8.1"
PLATFORM_ID="platform:el8"
PRETTY_NAME="Red Hat Enterprise Linux 8.1 (Ootpa)"
ANSI_COLOR="0;31"
redhat-release: Red Hat Enterprise Linux release 8.1 (Ootpa)
system-release: Red Hat Enterprise Linux release 8.1 (Ootpa)
system-release-cpe: cpe:/o:redhat:enterprise_linux:8.1:ga

```

```

uname -a:
Linux localhost.localdomain 4.18.0-147.el8.x86_64 #1 SMP Thu Sep 26 15:52:44 UTC 2019
x86_64 x86_64 x86_64 GNU/Linux

```

Kernel self-reported vulnerability status:

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 129

PowerEdge T440 (Intel Xeon Silver 4214, 2.20 GHz)

SPECrate®2017\_fp\_peak = 137

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2020

Hardware Availability: Feb-2020

Software Availability: Nov-2019

## Platform Notes (Continued)

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/swaps barriers and \_\_user pointer sanitization  
 CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling

run-level 3 Apr 15 15:31 last=5

SPEC is set to: /mnt/ramdisk/cpu2017

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
tmpfs	tmpfs	225G	7.5G	218G	4%	/mnt/ramdisk

From /sys/devices/virtual/dmi/id  
 BIOS: Dell Inc. 2.5.4 01/14/2020  
 Vendor: Dell Inc.  
 Product: PowerEdge T440  
 Product Family: PowerEdge  
 Serial: FBLH613

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:  
 4x 00AD00B300AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933  
 8x 00AD063200AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933  
 4x Not Specified Not Specified

(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 19.0.5.281 Build 20190815
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
=====
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 129

PowerEdge T440 (Intel Xeon Silver 4214, 2.20 GHz)

SPECrate®2017\_fp\_peak = 137

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2020

Hardware Availability: Feb-2020

Software Availability: Nov-2019

## Compiler Version Notes (Continued)

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 19.0.5.281 Build 20190815  
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 19.0.5.281 Build 20190815  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.0.5.281 Build 20190815  
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 19.0.5.281 Build 20190815  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.0.5.281 Build 20190815  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.0.5.281 Build 20190815  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

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 19.0.5.281 Build 20190815  
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 19.0.5.281 Build 20190815  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 129

PowerEdge T440 (Intel Xeon Silver 4214, 2.20 GHz)

SPECrate®2017\_fp\_peak = 137

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2020

Hardware Availability: Feb-2020

Software Availability: Nov-2019

## Compiler Version Notes (Continued)

Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.5.281 Build 20190815  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

## Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

ifort icc

Benchmarks using both C and C++:

icpc icc

Benchmarks using Fortran, C, and C++:

icpc icc ifort

## 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





# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 129

PowerEdge T440 (Intel Xeon Silver 4214, 2.20 GHz)

SPECrate®2017\_fp\_peak = 137

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2020

Hardware Availability: Feb-2020

Software Availability: Nov-2019

## Base Optimization Flags

C benchmarks:

-m64 -std=c11 -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4

C++ benchmarks:

-m64 -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4

Fortran benchmarks:

-m64 -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4 -auto  
-nostandard-realloc-lhs

Benchmarks using both Fortran and C:

-m64 -std=c11 -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4 -auto  
-nostandard-realloc-lhs

Benchmarks using both C and C++:

-m64 -std=c11 -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4

Benchmarks using Fortran, C, and C++:

-m64 -std=c11 -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4 -auto  
-nostandard-realloc-lhs

## Peak Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

ifort icc

Benchmarks using both C and C++:

icpc icc

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 129

PowerEdge T440 (Intel Xeon Silver 4214, 2.20 GHz)

SPECrate®2017\_fp\_peak = 137

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2020

Hardware Availability: Feb-2020

Software Availability: Nov-2019

## Peak Compiler Invocation (Continued)

Benchmarks using Fortran, C, and C++:

icpc icc ifort

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

519.lbm\_r: -m64 -std=c11 -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: basepeak = yes

544.nab\_r: basepeak = yes

C++ benchmarks:

508.namd\_r: -m64 -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

510.parest\_r: -m64 -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4

Fortran benchmarks:

503.bwaves\_r: -m64 -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4 -auto  
-nostandard-realloc-lhs

549.fotonik3d\_r: basepeak = yes

554.roms\_r: -m64 -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

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 129

PowerEdge T440 (Intel Xeon Silver 4214, 2.20 GHz)

SPECrate®2017\_fp\_peak = 137

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Apr-2020

Hardware Availability: Feb-2020

Software Availability: Nov-2019

## Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

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

Benchmarks using both C and C++:

```
511.povray_r: -m64 -std=c11 -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: basepeak = yes

Benchmarks using Fortran, C, and C++:

507.cactuBSSN\_r: basepeak = yes

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

[http://www.spec.org/cpu2017/flags/Intel-ic19.0u5-official-linux64\\_revD.html](http://www.spec.org/cpu2017/flags/Intel-ic19.0u5-official-linux64_revD.html)

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-revE9.html>

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

[http://www.spec.org/cpu2017/flags/Intel-ic19.0u5-official-linux64\\_revD.xml](http://www.spec.org/cpu2017/flags/Intel-ic19.0u5-official-linux64_revD.xml)

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-revE9.xml>

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 2020-04-15 23:13:25-0400.

Report generated on 2020-05-12 14:58:24 by CPU2017 PDF formatter v6255.

Originally published on 2020-05-12.