



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Dell Inc.

SPECrate®2017\_fp\_base = 99.0

PowerEdge M640 (Intel Xeon Gold 5217, 3.00GHz)

SPECrate®2017\_fp\_peak = 101

CPU2017 License: 55

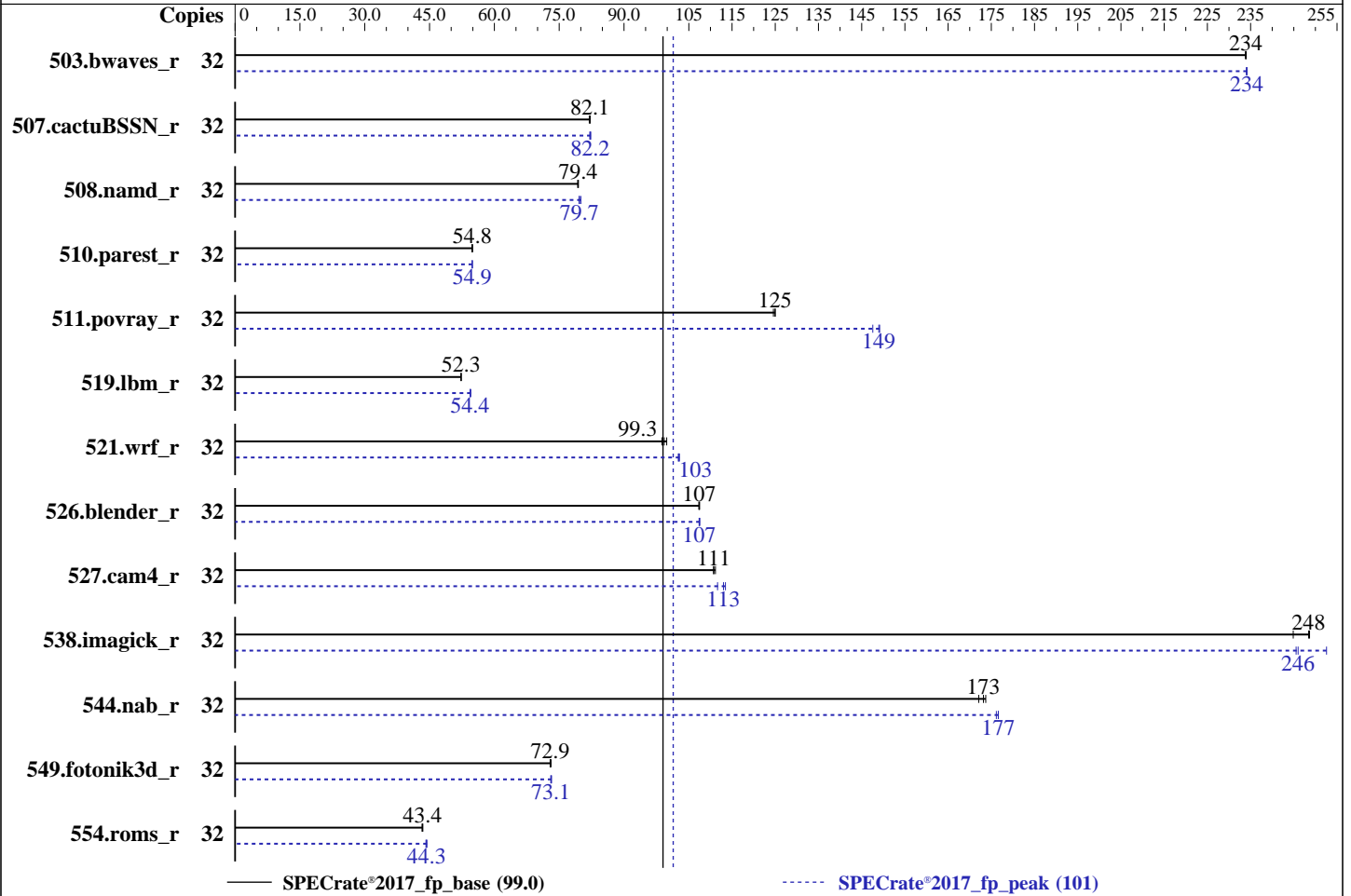
Test Date: Mar-2019

Test Sponsor: Dell Inc.

Hardware Availability: Apr-2019

Tested by: Dell Inc.

Software Availability: Aug-2019



### Hardware

CPU Name: Intel Xeon Gold 5217  
 Max MHz: 3700  
 Nominal: 3000  
 Enabled: 16 cores, 2 chips, 2 threads/core  
 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: 11 MB I+D on chip per chip  
 Other: None  
 Memory: 384 GB (12 x 32 GB 2Rx4 PC4-2933Y-R, running at 2666)  
 Storage: 1 x 480 GB SATA SSD  
 Other: None

### Software

OS: Ubuntu 18.04.2 LTS  
 4.15.0-60-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: No  
 Firmware: Version 2.2.11 released Jun-2019  
 File System: ext4  
 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 = 99.0

PowerEdge M640 (Intel Xeon Gold 5217, 3.00GHz)

SPECrate®2017\_fp\_peak = 101

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

Test Date: Mar-2019  
Hardware Availability: Apr-2019  
Software Availability: Aug-2019

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	32	<b>1372</b>	<b>234</b>	1373	234	1371	234	32	1370	234	<b>1371</b>	<b>234</b>	1371	234
507.cactuBSSN_r	32	493	82.2	494	82.0	<b>493</b>	<b>82.1</b>	32	492	82.3	<b>493</b>	<b>82.2</b>	494	82.1
508.namd_r	32	383	79.3	<b>383</b>	<b>79.4</b>	383	79.4	32	380	80.0	382	79.6	<b>381</b>	<b>79.7</b>
510.parest_r	32	1523	55.0	<b>1526</b>	<b>54.8</b>	1528	54.8	32	1525	54.9	1526	54.9	<b>1525</b>	<b>54.9</b>
511.povray_r	32	598	125	<b>598</b>	<b>125</b>	600	125	32	506	148	<b>502</b>	<b>149</b>	501	149
519.lbm_r	32	645	52.3	<b>645</b>	<b>52.3</b>	645	52.3	32	620	54.4	618	54.5	<b>620</b>	<b>54.4</b>
521.wrf_r	32	726	98.8	<b>722</b>	<b>99.3</b>	718	99.9	32	<b>698</b>	<b>103</b>	697	103	699	103
526.blender_r	32	453	107	<b>454</b>	<b>107</b>	454	107	32	454	107	453	108	<b>454</b>	<b>107</b>
527.cam4_r	32	503	111	<b>505</b>	<b>111</b>	506	111	32	<b>495</b>	<b>113</b>	501	112	493	113
538.imagick_r	32	<b>320</b>	<b>248</b>	325	245	320	249	32	<b>324</b>	<b>246</b>	315	253	324	246
544.nab_r	32	310	174	<b>311</b>	<b>173</b>	313	172	32	305	177	<b>305</b>	<b>177</b>	306	176
549.fotonik3d_r	32	1710	72.9	1706	73.1	<b>1709</b>	<b>72.9</b>	32	<b>1706</b>	<b>73.1</b>	1703	73.2	1706	73.1
554.roms_r	32	1176	43.3	<b>1172</b>	<b>43.4</b>	1171	43.4	32	<b>1148</b>	<b>44.3</b>	1151	44.2	1145	44.4

SPECrate®2017\_fp\_base = **99.0**

SPECrate®2017\_fp\_peak = **101**

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"

## General Notes

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

LD\_LIBRARY\_PATH = "/home/cpu2017/lib/ia32:/home/cpu2017/lib/intel64:/home/cpu2017/je5.0.1-32:/home/cpu2017/je5.0.1-64"

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

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 99.0

PowerEdge M640 (Intel Xeon Gold 5217, 3.00GHz)

SPECrate®2017\_fp\_peak = 101

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2019

Hardware Availability: Apr-2019

Software Availability: Aug-2019

## General Notes (Continued)

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  
Sub NUMA Cluster enabled  
Virtualization Technology disabled  
DCU Streamer Prefetcher enabled  
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 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 Wed Sep 11 03:45:07 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 5217 CPU @ 3.00GHz  
2 "physical id"s (chips)  
32 "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  
physical 1: cores 0 1 2 3 4 5 6 7

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

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 99.0

PowerEdge M640 (Intel Xeon Gold 5217, 3.00GHz)

SPECrate®2017\_fp\_peak = 101

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2019

Hardware Availability: Apr-2019

Software Availability: Aug-2019

## Platform Notes (Continued)

```

On-line CPU(s) list: 0-31
Thread(s) per core: 2
Core(s) per socket: 8
Socket(s): 2
NUMA node(s): 2
Vendor ID: GenuineIntel
CPU family: 6
Model: 85
Model name: Intel(R) Xeon(R) Gold 5217 CPU @ 3.00GHz
Stepping: 6
CPU MHz: 2289.072
BogoMIPS: 6000.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 11264K
NUMA node0 CPU(s): 0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30
NUMA node1 CPU(s): 1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31
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 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 : 11264 KB

```

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 24 26 28 30
node 0 size: 192836 MB
node 0 free: 191820 MB
node 1 cpus: 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31
node 1 size: 193532 MB
node 1 free: 192569 MB
node distances:
node  0  1
0:  10  21

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 99.0

PowerEdge M640 (Intel Xeon Gold 5217, 3.00GHz)

SPECrate®2017\_fp\_peak = 101

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2019

Hardware Availability: Apr-2019

Software Availability: Aug-2019

## Platform Notes (Continued)

1: 21 10

From /proc/meminfo

MemTotal: 395641916 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 4.15.0-60-generic #67-Ubuntu SMP Thu Aug 22 16:55:30 UTC 2019 x86\_64

x86\_64 x86\_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2017-5754 (Meltdown): Not affected

CVE-2017-5753 (Spectre variant 1): Mitigation: usercopy/swapgs barriers and \_\_user pointer sanitization

CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling

run-level 3 Sep 10 19:55

SPEC is set to: /home/cpu2017

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda2	ext4	439G	32G	385G	8%	/

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. 2.2.11 06/14/2019

Memory:

6x 00AD00B300AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933, configured at 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 = 99.0

PowerEdge M640 (Intel Xeon Gold 5217, 3.00GHz)

SPECrate®2017\_fp\_peak = 101

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2019

Hardware Availability: Apr-2019

Software Availability: Aug-2019

## Platform Notes (Continued)

3x 00AD063200AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933, configured at 2666  
3x 00AD069D00AD HMA84GR7CJR4N-WM 32 GB 2 rank 2933, configured at 2666  
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 19.0.4.227 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)  
-----
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 99.0

PowerEdge M640 (Intel Xeon Gold 5217, 3.00GHz)

SPECrate®2017\_fp\_peak = 101

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2019

Hardware Availability: Apr-2019

Software Availability: Aug-2019

## Compiler Version Notes (Continued)

64, Version 19.0.4.227 Build 20190416  
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 19.0.4.227 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 = 99.0

PowerEdge M640 (Intel Xeon Gold 5217, 3.00GHz)

SPECrate®2017\_fp\_peak = 101

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2019

Hardware Availability: Apr-2019

Software Availability: Aug-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 = 99.0

PowerEdge M640 (Intel Xeon Gold 5217, 3.00GHz)

SPECrate®2017\_fp\_peak = 101

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2019

Hardware Availability: Apr-2019

Software Availability: Aug-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 = 99.0

PowerEdge M640 (Intel Xeon Gold 5217, 3.00GHz)

SPECrate®2017\_fp\_peak = 101

CPU2017 License: 55

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2019

Hardware Availability: Apr-2019

Software Availability: Aug-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-ic19.0ul-official-linux64.2019-07-09.html>

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge14G-revE3.html>

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

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

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge14G-revE3.xml>



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 99.0

PowerEdge M640 (Intel Xeon Gold 5217, 3.00GHz)

SPECrate®2017\_fp\_peak = 101

**CPU2017 License:** 55

**Test Sponsor:** Dell Inc.

**Tested by:** Dell Inc.

**Test Date:** Mar-2019

**Hardware Availability:** Apr-2019

**Software Availability:** Aug-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 v1.0.5 on 2019-09-10 23:45:06-0400.

Report generated on 2019-10-01 14:15:43 by CPU2017 PDF formatter v6255.

Originally published on 2019-10-01.