



# SPEC® CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/D120h (Intel Xeon Platinum 8164)

CPU2017 License: 9006

Test Sponsor: NEC Corporation

Tested by: NEC Corporation

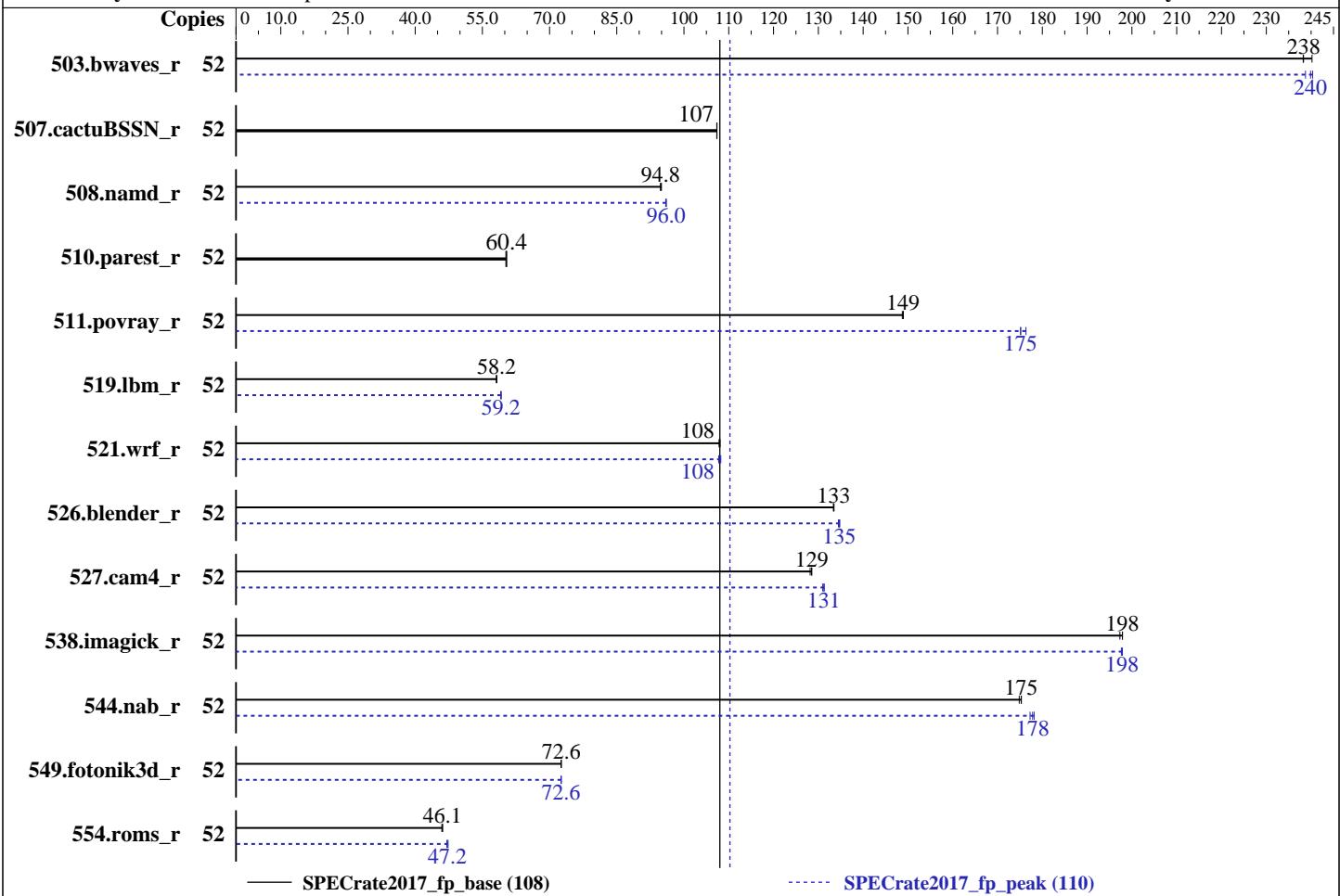
**SPECrate2017\_fp\_base = 108**

**SPECrate2017\_fp\_peak = 110**

**Test Date:** Aug-2018

**Hardware Availability:** Jan-2018

**Software Availability:** Mar-2018



— SPECrate2017\_fp\_base (108)

----- SPECrate2017\_fp\_peak (110)

### Hardware

CPU Name: Intel Xeon Platinum 8164  
 Max MHz.: 3700  
 Nominal: 2000  
 Enabled: 26 cores, 1 chip, 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: 35.75 MB I+D on chip per chip  
 Other: None  
 Memory: 192 GB (6 x 32 GB 2Rx4 PC4-2666V-R)  
 Storage: 1 x 1 TB SATA, 7200 RPM  
 Other: None

### Software

OS: Red Hat Enterprise Linux Server release 7.4 (Maipo)  
 Compiler: Kernel 3.10.0-693.21.1.el7.x86\_64  
 C/C++: Version 18.0.0.128 of Intel C/C++ Compiler for Linux;  
 Fortran: Version 18.0.0.128 of Intel Fortran Compiler for Linux  
 Parallel: No  
 Firmware: Version F21 02/22/2018 released Apr-2018  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 64-bit  
 Other: None



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/D120h (Intel Xeon Platinum 8164)

CPU2017 License: 9006

Test Sponsor: NEC Corporation

Tested by: NEC Corporation

**SPECrate2017\_fp\_base = 108**

**SPECrate2017\_fp\_peak = 110**

Test Date: Aug-2018

Hardware Availability: Jan-2018

Software Availability: Mar-2018

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	52	2189	238	2171	240	<b>2188</b>	<b>238</b>	52	<b>2174</b>	<b>240</b>	2184	239	2170	240
507.cactuBSSN_r	52	613	107	613	107	<b>613</b>	<b>107</b>	52	613	107	613	107	<b>613</b>	<b>107</b>
508.namd_r	52	<b>521</b>	<b>94.8</b>	521	94.8	520	95.0	52	<b>515</b>	<b>96.0</b>	515	95.9	514	96.1
510.parest_r	52	<b>2253</b>	<b>60.4</b>	2258	60.2	2252	60.4	52	<b>2253</b>	<b>60.4</b>	2258	60.2	2252	60.4
511.povray_r	52	<b>815</b>	<b>149</b>	816	149	815	149	52	<b>693</b>	<b>175</b>	693	175	689	176
519.lbm_r	52	<b>942</b>	<b>58.2</b>	943	58.1	942	58.2	52	926	59.2	927	59.1	<b>927</b>	<b>59.2</b>
521.wrf_r	52	<b>1079</b>	<b>108</b>	1080	108	1078	108	52	1081	108	1076	108	<b>1078</b>	<b>108</b>
526.blender_r	52	<b>594</b>	<b>133</b>	593	133	594	133	52	588	135	589	134	<b>588</b>	<b>135</b>
527.cam4_r	52	708	129	710	128	<b>708</b>	<b>129</b>	52	<b>693</b>	<b>131</b>	694	131	693	131
538.imagick_r	52	655	197	654	198	<b>654</b>	<b>198</b>	52	654	198	654	198	<b>654</b>	<b>198</b>
544.nab_r	52	501	175	499	175	<b>499</b>	<b>175</b>	52	491	178	494	177	<b>492</b>	<b>178</b>
549.fotonik3d_r	52	2791	72.6	2792	72.6	<b>2792</b>	<b>72.6</b>	52	2791	72.6	<b>2792</b>	<b>72.6</b>	2793	72.6
554.roms_r	52	1798	46.0	1792	46.1	<b>1793</b>	<b>46.1</b>	52	1755	47.1	1745	47.3	<b>1752</b>	<b>47.2</b>

**SPECrate2017\_fp\_base = 108**

**SPECrate2017\_fp\_peak = 110**

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 i7-4790 CPU + 32GB RAM memory using Redhat Enterprise Linux 7.4

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>
```

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/D120h (Intel Xeon Platinum 8164)

CPU2017 License: 9006

Test Sponsor: NEC Corporation

Tested by: NEC Corporation

**SPECrate2017\_fp\_base = 108**

**SPECrate2017\_fp\_peak = 110**

Test Date: Aug-2018

Hardware Availability: Jan-2018

Software Availability: Mar-2018

## General Notes (Continued)

is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (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.

## Platform Notes

BIOS Settings:

ENERGY\_PERF\_BIAS\_CFG mode: Performance

SNC: Enable

IMC Interleaving: 1-way Interleave

LLC dead line alloc: Disable

Patrol Scrub: Disable

Sysinfo program /home/cpu2017/bin/sysinfo

Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f

running on d120h Fri Aug 3 20:13:22 2018

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) Platinum 8164 CPU @ 2.00GHz

1 "physical id"s (chips)

52 "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 : 26

siblings : 52

physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 22 24 25 26 27 28  
29

From lscpu:

Architecture: x86\_64

CPU op-mode(s): 32-bit, 64-bit

Byte Order: Little Endian

CPU(s): 52

On-line CPU(s) list: 0-51

Thread(s) per core: 2

Core(s) per socket: 26

Socket(s): 1

NUMA node(s): 2

Vendor ID: GenuineIntel

CPU family: 6

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/D120h (Intel Xeon Platinum 8164)

CPU2017 License: 9006

Test Sponsor: NEC Corporation

Tested by: NEC Corporation

**SPECrate2017\_fp\_base = 108**

**SPECrate2017\_fp\_peak = 110**

**Test Date:** Aug-2018

**Hardware Availability:** Jan-2018

**Software Availability:** Mar-2018

## Platform Notes (Continued)

```

Model: 85
Model name: Intel(R) Xeon(R) Platinum 8164 CPU @ 2.00GHz
Stepping: 4
CPU MHz: 1861.484
CPU max MHz: 3700.0000
CPU min MHz: 1000.0000
BogoMIPS: 4000.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 36608K
NUMA node0 CPU(s): 0-3,7-9,13-15,20-22,26-29,33-35,39-41,46-48
NUMA node1 CPU(s): 4-6,10-12,16-19,23-25,30-32,36-38,42-45,49-51
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
aperfmpfperf eagerfpu pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 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 epb cat_l3 cdp_l3 invpcid_single
intel_pt spec_ctrl ibpb_support 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 avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1
cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local dtherm ida arat pln pts hwp
hwp_act_window hwp_epp hwp_pkg_req

```

```
/proc/cpuinfo cache data
cache size : 36608 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 1 2 3 7 8 9 13 14 15 20 21 22 26 27 28 29 33 34 35 39 40 41 46 47 48
node 0 size: 96932 MB
node 0 free: 94203 MB
node 1 cpus: 4 5 6 10 11 12 16 17 18 19 23 24 25 30 31 32 36 37 38 42 43 44 45 49 50 51
node 1 size: 98304 MB
node 1 free: 95625 MB
node distances:
node 0 1
 0: 10 11
 1: 11 10

```

From /proc/meminfo

```

MemTotal: 196475872 kB
HugePages_Total: 0
Hugepagesize: 2048 kB
```

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/D120h (Intel Xeon Platinum 8164)

CPU2017 License: 9006

Test Sponsor: NEC Corporation

Tested by: NEC Corporation

**SPECrate2017\_fp\_base = 108**

**SPECrate2017\_fp\_peak = 110**

Test Date: Aug-2018

Hardware Availability: Jan-2018

Software Availability: Mar-2018

## Platform Notes (Continued)

```
From /etc/*release* /etc/*version*
os-release:
  NAME="Red Hat Enterprise Linux Server"
  VERSION="7.4 (Maipo)"
  ID="rhel"
  ID_LIKE="fedora"
  VARIANT="Server"
  VARIANT_ID="server"
  VERSION_ID="7.4"
  PRETTY_NAME="Red Hat Enterprise Linux Server 7.4 (Maipo)"
redhat-release: Red Hat Enterprise Linux Server release 7.4 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.4 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.4:ga:server
```

```
uname -a:
Linux d120h 3.10.0-693.21.1.el7.x86_64 #1 SMP Fri Feb 23 18:54:16 UTC 2018 x86_64
x86_64 x86_64 GNU/Linux
```

```
run-level 3 Aug 3 20:07
```

```
SPEC is set to: /home/cpu2017
```

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda3	ext4	909G	410G	452G	48%	/

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 GIGABYTE F21 02/22/2018

Memory:

10x NO DIMM NO DIMM
6x Samsung M393A4K40BB2-CTD 32 GB 2 rank 2666

(End of data from sysinfo program)

## Compiler Version Notes

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

```
=====
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
=====
```

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/D120h (Intel Xeon Platinum 8164)

CPU2017 License: 9006

Test Sponsor: NEC Corporation

Tested by: NEC Corporation

**SPECrate2017\_fp\_base = 108**

**SPECrate2017\_fp\_peak = 110**

Test Date: Aug-2018

Hardware Availability: Jan-2018

Software Availability: Mar-2018

## Compiler Version Notes (Continued)

CC 519.lbm\_r(peak) 544.nab\_r(peak)

=====  
icc (ICC) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====  
CXXC 508.namd\_r(base) 510.parest\_r(base)

=====  
icpc (ICC) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====  
CXXC 508.namd\_r(peak) 510.parest\_r(peak)

=====  
icpc (ICC) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====  
CC 511.povray\_r(base) 526.blender\_r(base)

=====  
icpc (ICC) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====  
icc (ICC) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====  
CC 511.povray\_r(peak) 526.blender\_r(peak)

=====  
icpc (ICC) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====  
icc (ICC) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====  
FC 507.cactubSSN\_r(base)

=====  
icpc (ICC) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====  
icc (ICC) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====  
ifort (IFORT) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/D120h (Intel Xeon Platinum 8164)

CPU2017 License: 9006

Test Sponsor: NEC Corporation

Tested by: NEC Corporation

**SPECrate2017\_fp\_base = 108**

**SPECrate2017\_fp\_peak = 110**

Test Date: Aug-2018

Hardware Availability: Jan-2018

Software Availability: Mar-2018

## Compiler Version Notes (Continued)

=====

FC 507.cactubSSN\_r(peak)

icpc (ICC) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

icc (ICC) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

ifort (IFORT) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====

FC 503.bwaves\_r(base, peak) 549.fotonik3d\_r(base, peak) 554.roms\_r(base)

ifort (IFORT) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====

FC 554.roms\_r(peak)

ifort (IFORT) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====

CC 521.wrf\_r(base) 527.cam4\_r(base)

ifort (IFORT) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

icc (ICC) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====

CC 521.wrf\_r(peak) 527.cam4\_r(peak)

ifort (IFORT) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

icc (ICC) 18.0.0 20170811

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/D120h (Intel Xeon Platinum 8164)

CPU2017 License: 9006

Test Sponsor: NEC Corporation

Tested by: NEC Corporation

SPECrate2017\_fp\_base = 108

SPECrate2017\_fp\_peak = 110

Test Date: Aug-2018

Hardware Availability: Jan-2018

Software Availability: Mar-2018

## 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++:

icpcicc

Benchmarks using Fortran, C, and C++:

icpciccifort

## 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=3

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/D120h (Intel Xeon Platinum 8164)

**CPU2017 License:** 9006

**Test Sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**SPECrate2017\_fp\_base = 108**

**SPECrate2017\_fp\_peak = 110**

**Test Date:** Aug-2018

**Hardware Availability:** Jan-2018

**Software Availability:** Mar-2018

## Base Optimization Flags (Continued)

C++ benchmarks (continued):

-qopt-mem-layout-trans=3

Fortran benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3 -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=3 -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=3

Benchmarks using Fortran, C, and C++:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte

## Base Other Flags

C benchmarks:

-m64 -std=c11

C++ benchmarks:

-m64

Fortran benchmarks:

-m64

Benchmarks using both Fortran and C:

-m64 -std=c11

Benchmarks using both C and C++:

-m64 -std=c11

Benchmarks using Fortran, C, and C++:

-m64 -std=c11



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/D120h (Intel Xeon Platinum 8164)

CPU2017 License: 9006

Test Sponsor: NEC Corporation

Tested by: NEC Corporation

**SPECrate2017\_fp\_base = 108**

**SPECrate2017\_fp\_peak = 110**

Test Date: Aug-2018

Hardware Availability: Jan-2018

Software Availability: Mar-2018

## 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++:

icpcicc

Benchmarks using Fortran, C, and C++:

icpciccifort

## 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=3

538.imagick\_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=3

544.nab\_r: Same as 519.lbm\_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=3

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/D120h (Intel Xeon Platinum 8164)

CPU2017 License: 9006

Test Sponsor: NEC Corporation

Tested by: NEC Corporation

SPECrate2017\_fp\_base = 108

SPECrate2017\_fp\_peak = 110

Test Date: Aug-2018

Hardware Availability: Jan-2018

Software Availability: Mar-2018

## Peak Optimization Flags (Continued)

510.parest\_r: basepeak = yes

Fortran benchmarks:

```
503.bwaves_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=3  
-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=3 -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=3 -nostandard-realloc-lhs -align array32byte
```

Benchmarks using both C 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=3
```

Benchmarks using Fortran, C, and C++:

507.cactuBSSN\_r: basepeak = yes

## Peak Other Flags

C benchmarks:

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

C++ benchmarks:

```
-m64
```

Fortran benchmarks:

```
-m64
```

Benchmarks using both Fortran and C:

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

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/D120h (Intel Xeon Platinum 8164)

**CPU2017 License:** 9006

**Test Sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**SPECrate2017\_fp\_base = 108**

**SPECrate2017\_fp\_peak = 110**

**Test Date:** Aug-2018

**Hardware Availability:** Jan-2018

**Software Availability:** Mar-2018

## Peak Other Flags (Continued)

Benchmarks using both C and C++:

-m64 -std=c11

Benchmarks using Fortran, C, and C++:

-m64 -std=c11

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

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-10-19.html>

<http://www.spec.org/cpu2017/flags/NEC-Platform-Settings-V1.2-D120h-RevA.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-10-19.xml>

<http://www.spec.org/cpu2017/flags/NEC-Platform-Settings-V1.2-D120h-RevA.xml>

SPEC is a registered trademark 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 CPU2017 v1.0.2 on 2018-08-03 07:13:22-0400.

Report generated on 2018-10-31 18:21:15 by CPU2017 PDF formatter v6067.

Originally published on 2018-09-04.