



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## NEC Corporation

SPECrate®2017\_fp\_base = 46.5

Express5800/R120h-1E (Intel Xeon Silver 4208)

SPECrate®2017\_fp\_peak = 48.6

CPU2017 License: 9006

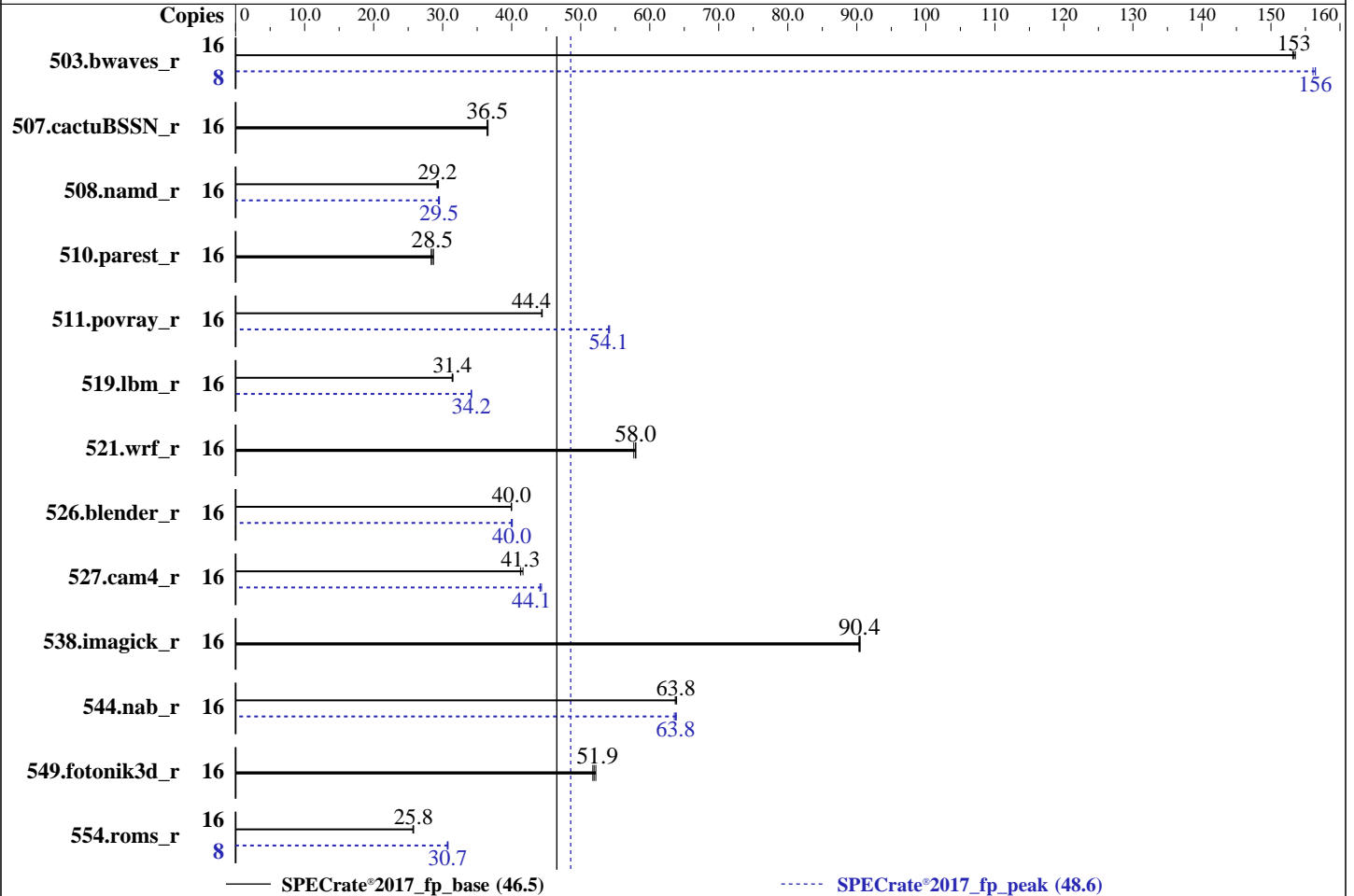
Test Date: Mar-2020

Test Sponsor: NEC Corporation

Hardware Availability: Jul-2019

Tested by: NEC Corporation

Software Availability: Sep-2019



### Hardware

CPU Name: Intel Xeon Silver 4208  
 Max MHz: 3200  
 Nominal: 2100  
 Enabled: 8 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: 11 MB I+D on chip per chip  
 Other: None  
 Memory: 96 GB (6 x 16 GB 2Rx8 PC4-2933Y-R, running at 2400)  
 Storage: 1 x 1 TB SATA, 7200 RPM, RAID 0  
 Other: None

### Software

OS: Red Hat Enterprise Linux Server release 7.7 (Maipo)  
 Kernel 3.10.0-1062.1.1.el7.x86\_64  
 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: NEC BIOS Version U31 v2.22 11/13/2019 released Mar-2020  
 File System: ext4  
 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

## NEC Corporation

SPECrate®2017\_fp\_base = 46.5

Express5800/R120h-1E (Intel Xeon Silver 4208)

SPECrate®2017\_fp\_peak = 48.6

CPU2017 License: 9006  
Test Sponsor: NEC Corporation  
Tested by: NEC Corporation

Test Date: Mar-2020  
Hardware Availability: Jul-2019  
Software Availability: Sep-2019

### Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	16	<b>1046</b>	<b>153</b>	1048	153	1045	154	8	513	156	<b>513</b>	<b>156</b>	514	156
507.cactuBSSN_r	16	556	36.4	554	36.6	<b>556</b>	<b>36.5</b>	16	556	36.4	554	36.6	<b>556</b>	<b>36.5</b>
508.namd_r	16	521	29.2	<b>520</b>	<b>29.2</b>	517	29.4	16	517	29.4	515	29.5	<b>515</b>	<b>29.5</b>
510.parest_r	16	1459	28.7	<b>1469</b>	<b>28.5</b>	1478	28.3	16	1459	28.7	<b>1469</b>	<b>28.5</b>	1478	28.3
511.povray_r	16	<b>841</b>	<b>44.4</b>	841	44.4	843	44.3	16	<b>691</b>	<b>54.1</b>	691	54.0	690	54.2
519.lbm_r	16	<b>537</b>	<b>31.4</b>	536	31.5	538	31.4	16	494	34.2	494	34.1	<b>494</b>	<b>34.2</b>
521.wrf_r	16	621	57.7	618	58.0	<b>618</b>	<b>58.0</b>	16	621	57.7	618	58.0	<b>618</b>	<b>58.0</b>
526.blender_r	16	610	40.0	<b>610</b>	<b>40.0</b>	610	39.9	16	610	40.0	608	40.1	<b>609</b>	<b>40.0</b>
527.cam4_r	16	672	41.6	678	41.3	<b>677</b>	<b>41.3</b>	16	<b>634</b>	<b>44.1</b>	634	44.1	631	44.3
538.imagick_r	16	<b>440</b>	<b>90.4</b>	441	90.3	440	90.5	16	<b>440</b>	<b>90.4</b>	441	90.3	440	90.5
544.nab_r	16	421	63.9	<b>422</b>	<b>63.8</b>	423	63.7	16	<b>422</b>	<b>63.8</b>	424	63.6	422	63.8
549.fotonik3d_r	16	1205	51.7	<b>1201</b>	<b>51.9</b>	1195	52.2	16	1205	51.7	<b>1201</b>	<b>51.9</b>	1195	52.2
554.roms_r	16	986	25.8	<b>987</b>	<b>25.8</b>	990	25.7	8	<b>414</b>	<b>30.7</b>	415	30.7	413	30.8

SPECrate®2017\_fp\_base = 46.5

SPECrate®2017\_fp\_peak = 48.6

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

### Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset 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/lib/intel64"

### General Notes

Binaries compiled on a system with 1x Intel Core i9-7900X CPU + 32GB RAM  
memory using Redhat Enterprise Linux 7.5  
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

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## NEC Corporation

SPECrate®2017\_fp\_base = 46.5

Express5800/R120h-1E (Intel Xeon Silver 4208)

SPECrate®2017\_fp\_peak = 48.6

**CPU2017 License:** 9006  
**Test Sponsor:** NEC Corporation  
**Tested by:** NEC Corporation

**Test Date:** Mar-2020  
**Hardware Availability:** Jul-2019  
**Software Availability:** Sep-2019

### General Notes (Continued)

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.

### Platform Notes

#### BIOS Settings:

Thermal Configuration: Maximum Cooling  
Workload Profile: General Throughput Compute  
Memory Patrol Scrubbing: Disabled  
LLC Dead Line Allocation: Disabled  
LLC Prefetch: Enabled  
Enhanced Processor Performance: Enabled  
Workload Profile: Custom  
Advanced Memory Protection: Advanced ECC Support  
Sub-NUMA Clustering: Disabled

Sysinfo program /home/cpu2017/bin/sysinfo  
Rev: r6365 of 2019-08-21 295195f888a3d7edb1e6e46a485a0011  
running on r120h1e Fri Mar 27 19:38:35 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 4208 CPU @ 2.10GHz
 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
Byte Order: Little Endian
CPU(s): 16
On-line CPU(s) list: 0-15
Thread(s) per core: 2
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## NEC Corporation

SPECrate®2017\_fp\_base = 46.5

Express5800/R120h-1E (Intel Xeon Silver 4208)

SPECrate®2017\_fp\_peak = 48.6

CPU2017 License: 9006

Test Sponsor: NEC Corporation

Tested by: NEC Corporation

Test Date: Mar-2020

Hardware Availability: Jul-2019

Software Availability: Sep-2019

### Platform Notes (Continued)

```

Core(s) per socket:      8
Socket(s):              1
NUMA node(s):          1
Vendor ID:              GenuineIntel
CPU family:             6
Model:                  85
Model name:             Intel(R) Xeon(R) Silver 4208 CPU @ 2.10GHz
Stepping:               6
CPU MHz:                2100.000
BogoMIPS:               4200.00
Virtualization:        VT-x
L1d cache:              32K
L1i cache:              32K
L2 cache:               1024K
L3 cache:               11264K
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
aperfperf eagerfpu 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 epb cat_l3 cdp_l3 invpcid_single
intel_ppin intel_pt ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi
flexpriority ept vpid fsgsbase tsc_adjust bmil 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 pku ospke avx512_vnni md_clear spec_ctrl intel_stibp
flush_lld 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: 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: 97961 MB
node 0 free: 95224 MB
node distances:
node 0
0: 10

```

```

From /proc/meminfo

```

```

MemTotal:      98657388 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## NEC Corporation

SPECrate®2017\_fp\_base = 46.5

Express5800/R120h-1E (Intel Xeon Silver 4208)

SPECrate®2017\_fp\_peak = 48.6

**CPU2017 License:** 9006  
**Test Sponsor:** NEC Corporation  
**Tested by:** NEC Corporation

**Test Date:** Mar-2020  
**Hardware Availability:** Jul-2019  
**Software Availability:** Sep-2019

### Platform Notes (Continued)

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

os-release:

```
NAME="Red Hat Enterprise Linux Server"
VERSION="7.7 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VARIANT="Server"
VARIANT_ID="server"
VERSION_ID="7.7"
```

```
PRETTY_NAME="Red Hat Enterprise Linux Server 7.7 (Maipo)"
```

```
redhat-release: Red Hat Enterprise Linux Server release 7.7 (Maipo)
```

```
system-release: Red Hat Enterprise Linux Server release 7.7 (Maipo)
```

```
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.7:ga:server
```

uname -a:

```
Linux r120h1e 3.10.0-1062.1.1.el7.x86_64 #1 SMP Tue Aug 13 18:39:59 UTC 2019 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: Load fences, usercopy/swaps
                                              barriers and __user pointer sanitization
CVE-2017-5715 (Spectre variant 2):         Mitigation: Full retpoline, IBPB
```

run-level 3 Mar 27 19:32

SPEC is set to: /home/cpu2017

```
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3        ext4  908G  54G  809G   7% /
```

From /sys/devices/virtual/dmi/id

```
BIOS:          NEC U31 11/13/2019
Vendor:        NEC
Product:       Express5800/R120h-1E
Serial:        7CE721P1MV
```

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:

```
6x HPE P03050-091 16 GB 2 rank 2933
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## NEC Corporation

SPECrate®2017\_fp\_base = 46.5

Express5800/R120h-1E (Intel Xeon Silver 4208)

SPECrate®2017\_fp\_peak = 48.6

**CPU2017 License:** 9006  
**Test Sponsor:** NEC Corporation  
**Tested by:** NEC Corporation

**Test Date:** Mar-2020  
**Hardware Availability:** Jul-2019  
**Software Availability:** Sep-2019

### Platform Notes (Continued)

10x UNKNOWN NOT AVAILABLE

(End of data from sysinfo program)

Regarding the sysinfo display about the memory speed, the correct configured memory speed is 2400 MT/s. The dmidecode description should be as follows:

6x HPE P03050-091 16 GB 2 rank 2933, configured at 2400

### 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.

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## NEC Corporation

SPECrate®2017\_fp\_base = 46.5

Express5800/R120h-1E (Intel Xeon Silver 4208)

SPECrate®2017\_fp\_peak = 48.6

CPU2017 License: 9006

Test Date: Mar-2020

Test Sponsor: NEC Corporation

Hardware Availability: Jul-2019

Tested by: NEC Corporation

Software Availability: Sep-2019

### Compiler Version Notes (Continued)

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 | 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 2017-2020 Standard Performance Evaluation Corporation

**NEC Corporation**

SPECrate®2017\_fp\_base = 46.5

Express5800/R120h-1E (Intel Xeon Silver 4208)

SPECrate®2017\_fp\_peak = 48.6

**CPU2017 License:** 9006  
**Test Sponsor:** NEC Corporation  
**Tested by:** NEC Corporation

**Test Date:** Mar-2020  
**Hardware Availability:** Jul-2019  
**Software Availability:** Sep-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<sup>®</sup>2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

**NEC Corporation**

SPECrate<sup>®</sup>2017\_fp\_base = 46.5

Express5800/R120h-1E (Intel Xeon Silver 4208)

SPECrate<sup>®</sup>2017\_fp\_peak = 48.6

**CPU2017 License:** 9006

**Test Sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test Date:** Mar-2020

**Hardware Availability:** Jul-2019

**Software Availability:** Sep-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: basepeak = yes
```

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

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 2017-2020 Standard Performance Evaluation Corporation

## NEC Corporation

SPECrate®2017\_fp\_base = 46.5

Express5800/R120h-1E (Intel Xeon Silver 4208)

SPECrate®2017\_fp\_peak = 48.6

CPU2017 License: 9006

Test Sponsor: NEC Corporation

Tested by: NEC Corporation

Test Date: Mar-2020

Hardware Availability: Jul-2019

Software Availability: Sep-2019

## 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=4 -auto  
-nostandard-realloc-lhs -align array32byte

549.fotonik3d\_r: basepeak = yes

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:

521.wrf\_r: basepeak = yes

527.cam4\_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 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++:

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-ic19.0ul-official-linux64.2019-07-09.html>

<http://www.spec.org/cpu2017/flags/NEC-Platform-Settings-V1.2-R120h-RevE.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/NEC-Platform-Settings-V1.2-R120h-RevE.xml>



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

**NEC Corporation**

SPECrate®2017\_fp\_base = 46.5

Express5800/R120h-1E (Intel Xeon Silver 4208)

SPECrate®2017\_fp\_peak = 48.6

**CPU2017 License:** 9006

**Test Sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test Date:** Mar-2020

**Hardware Availability:** Jul-2019

**Software Availability:** Sep-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 2020-03-27 06:38:35-0400.

Report generated on 2020-04-14 14:03:51 by CPU2017 PDF formatter v6255.

Originally published on 2020-04-14.