



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Inspur Corporation

### Inspur NF5280M5 (Intel Xeon Gold 5218)

CPU2017 License: 3358

Test Sponsor: Inspur Corporation

Tested by: Inspur Corporation

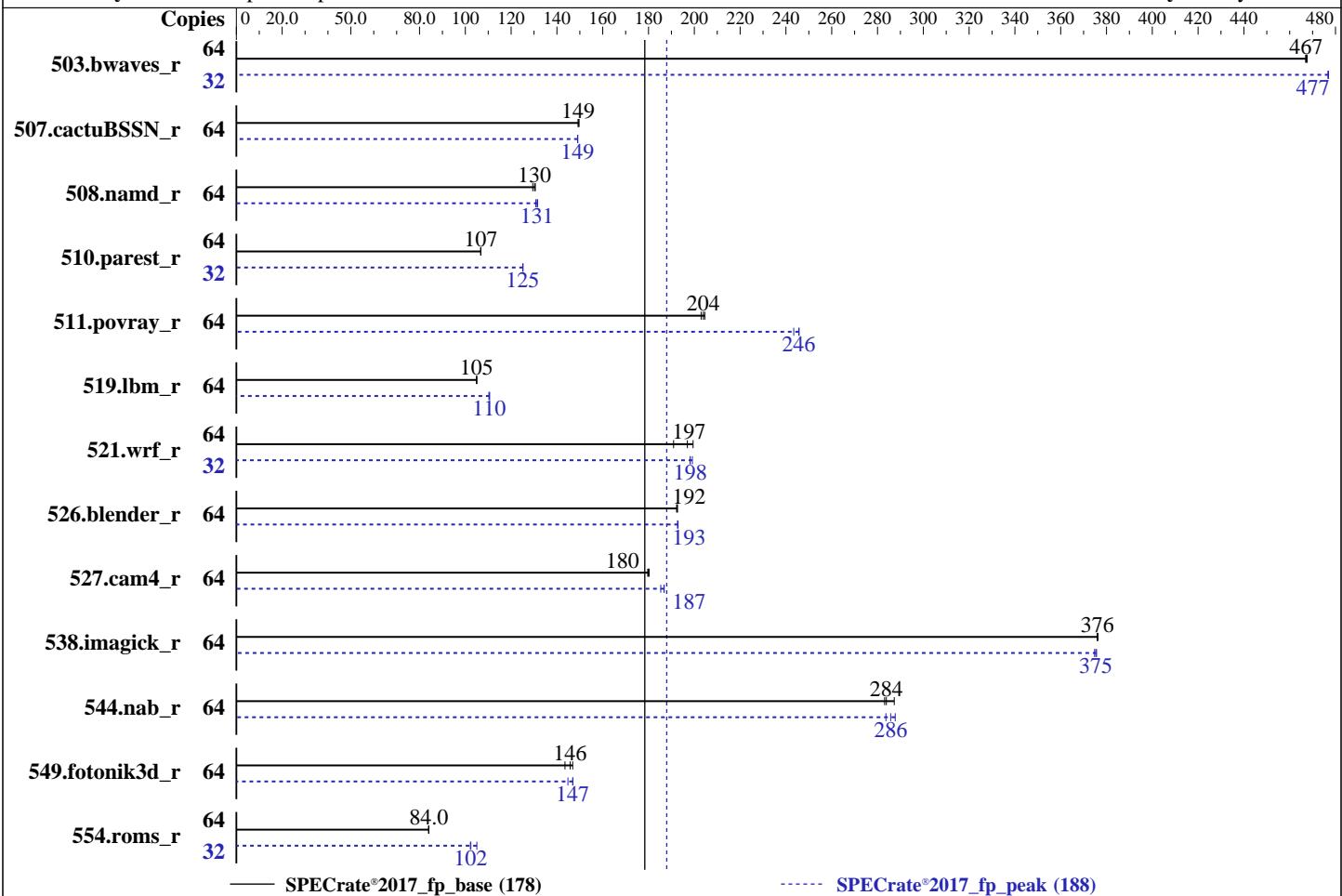
**SPECrate®2017\_fp\_base = 178**

**SPECrate®2017\_fp\_peak = 188**

**Test Date:** Sep-2019

**Hardware Availability:** Apr-2019

**Software Availability:** May-2019



— SPECrate®2017\_fp\_base (178)

····· SPECrate®2017\_fp\_peak (188)

## Hardware

CPU Name: Intel Xeon Gold 5218  
 Max MHz: 3900  
 Nominal: 2300  
 Enabled: 32 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: 22 MB I+D on chip per chip  
 Other: None  
 Memory: 384 GB (24 x 16 GB 2Rx4 PC4-2933Y-R, running at 2666)  
 Storage: 1 x 480 GB SATA SSD  
 Other: None

## Software

OS: SUSE Linux Enterprise Server 12 SP4  
 4.12.14-94.41-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 4.1.5 released Feb-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

## Inspur Corporation

Inspur NF5280M5 (Intel Xeon Gold 5218)

SPECrate®2017\_fp\_base = 178

SPECrate®2017\_fp\_peak = 188

CPU2017 License: 3358

Test Date: Sep-2019

Test Sponsor: Inspur Corporation

Hardware Availability: Apr-2019

Tested by: Inspur Corporation

Software Availability: May-2019

## Results Table

| Benchmark                   | Base   |             |             |             |            |             |            | Peak   |            |            |             |            |            |            |
|-----------------------------|--------|-------------|-------------|-------------|------------|-------------|------------|--------|------------|------------|-------------|------------|------------|------------|
|                             | Copies | Seconds     | Ratio       | Seconds     | Ratio      | Seconds     | Ratio      | Copies | Seconds    | Ratio      | Seconds     | Ratio      | Seconds    | Ratio      |
| 503.bwaves_r                | 64     | 1372        | 468         | 1374        | 467        | <b>1374</b> | <b>467</b> | 32     | 673        | 477        | 673         | 477        | <b>673</b> | <b>477</b> |
| 507.cactubSSN_r             | 64     | <b>543</b>  | <b>149</b>  | 543         | 149        | 541         | 150        | 64     | <b>544</b> | <b>149</b> | 543         | 149        | <b>544</b> | <b>149</b> |
| 508.namd_r                  | 64     | <b>467</b>  | <b>130</b>  | 470         | 129        | 466         | 131        | 64     | <b>463</b> | <b>131</b> | 462         | 132        | <b>465</b> | <b>131</b> |
| 510.parest_r                | 64     | <b>1568</b> | <b>107</b>  | 1569        | 107        | 1568        | 107        | 32     | <b>669</b> | <b>125</b> | 669         | 125        | <b>669</b> | <b>125</b> |
| 511.povray_r                | 64     | 731         | 205         | <b>733</b>  | <b>204</b> | 736         | 203        | 64     | 614        | 243        | 608         | 246        | <b>608</b> | <b>246</b> |
| 519.lbm_r                   | 64     | 642         | 105         | 643         | 105        | <b>643</b>  | <b>105</b> | 64     | <b>611</b> | <b>110</b> | 610         | 111        | 612        | 110        |
| 521.wrf_r                   | 64     | 751         | 191         | 719         | 199        | <b>728</b>  | <b>197</b> | 32     | 360        | 199        | 362         | 198        | <b>362</b> | <b>198</b> |
| 526.blender_r               | 64     | 506         | 193         | 507         | 192        | <b>507</b>  | <b>192</b> | 64     | 505        | 193        | 506         | 193        | <b>505</b> | <b>193</b> |
| 527.cam4_r                  | 64     | <b>622</b>  | <b>180</b>  | 623         | 180        | 621         | 180        | 64     | <b>600</b> | <b>187</b> | 604         | 185        | <b>599</b> | 187        |
| 538.imagick_r               | 64     | 423         | 376         | <b>423</b>  | <b>376</b> | 423         | 376        | 64     | 425        | 375        | <b>424</b>  | <b>375</b> | 424        | 376        |
| 544.nab_r                   | 64     | 380         | 283         | 375         | 287        | <b>379</b>  | <b>284</b> | 64     | 374        | 288        | 380         | 284        | <b>377</b> | <b>286</b> |
| 549.fotonik3d_r             | 64     | 1738        | 144         | <b>1711</b> | <b>146</b> | 1698        | 147        | 64     | 1722       | 145        | <b>1698</b> | <b>147</b> | 1697       | 147        |
| 554.roms_r                  | 64     | <b>1210</b> | <b>84.0</b> | 1212        | 83.9       | 1209        | 84.1       | 32     | 498        | 102        | <b>497</b>  | <b>102</b> | 484        | 105        |
| SPECrate®2017_fp_base = 178 |        |             |             |             |            |             |            |        |            |            |             |            |            |            |
| SPECrate®2017_fp_peak = 188 |        |             |             |             |            |             |            |        |            |            |             |            |            |            |

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/intel64"

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

runcpu command invoked through numactl i.e.:

numactl --interleave=all runcpu <etc>

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

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Inspur Corporation

### Inspur NF5280M5 (Intel Xeon Gold 5218)

CPU2017 License: 3358

Test Sponsor: Inspur Corporation

Tested by: Inspur Corporation

SPECrate®2017\_fp\_base = 178

SPECrate®2017\_fp\_peak = 188

Test Date: Sep-2019

Hardware Availability: Apr-2019

Software Availability: May-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-2017-5753 (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 and OS configuration:

SCALING\_GOVERNOR set to Performance

Hardware Prefetch set to Disable

VT Support set to Disable

C1E Support set to Disable

IMC (Integrated memory controller) Interleaving set to 1-way

Sub NUMA Cluster (SNC) set to Enable

Sysinfo program /home/CPU2017/bin/sysinfo

Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9

running on linux-mqjy Thu Sep 12 16:27:53 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 5218 CPU @ 2.30GHz
  2 "physical id"s (chips)
  64 "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 : 16
siblings : 32
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
```

From lscpu:

```
Architecture:           x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:            Little Endian
CPU(s):                64
On-line CPU(s) list:  0-63
Thread(s) per core:   2
Core(s) per socket:   16
Socket(s):             2
NUMA node(s):          4
Vendor ID:             GenuineIntel
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

**Inspur Corporation**

**SPECrate®2017\_fp\_base = 178**

**Inspur NF5280M5 (Intel Xeon Gold 5218)**

**SPECrate®2017\_fp\_peak = 188**

**CPU2017 License:** 3358

**Test Date:** Sep-2019

**Test Sponsor:** Inspur Corporation

**Hardware Availability:** Apr-2019

**Tested by:** Inspur Corporation

**Software Availability:** May-2019

## Platform Notes (Continued)

```

CPU family: 6
Model: 85
Model name: Intel(R) Xeon(R) Gold 5218 CPU @ 2.30GHz
Stepping: 6
CPU MHz: 2300.000
CPU max MHz: 3900.0000
CPU min MHz: 1000.0000
BogoMIPS: 4600.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 22528K
NUMA node0 CPU(s): 0-3,8-11,32-35,40-43
NUMA node1 CPU(s): 4-7,12-15,36-39,44-47
NUMA node2 CPU(s): 16-19,24-27,48-51,56-59
NUMA node3 CPU(s): 20-23,28-31,52-55,60-63
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
aperfmpfperf pni pclmulqdq dtes64 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 cpuid_fault epb cat_13 cdp_13 invpcid_single ssbd
mba ibrs ibpb stibp tpr_shadow vnmi flexpriority ept vpid fsgsbbase 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 xsavenc xgetbv1 xsaves
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 pku ospke avx512_vnni flush_l1d arch_capabilities

```

```
/proc/cpuinfo cache data
cache size : 22528 KB
```

```
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 1 2 3 8 9 10 11 32 33 34 35 40 41 42 43
node 0 size: 95263 MB
node 0 free: 85344 MB
node 1 cpus: 4 5 6 7 12 13 14 15 36 37 38 39 44 45 46 47
node 1 size: 96733 MB
node 1 free: 89048 MB
node 2 cpus: 16 17 18 19 24 25 26 27 48 49 50 51 56 57 58 59
node 2 size: 96762 MB
node 2 free: 89111 MB
node 3 cpus: 20 21 22 23 28 29 30 31 52 53 54 55 60 61 62 63
node 3 size: 96562 MB
node 3 free: 89046 MB

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Inspur Corporation

SPECrate®2017\_fp\_base = 178

Inspur NF5280M5 (Intel Xeon Gold 5218)

SPECrate®2017\_fp\_peak = 188

CPU2017 License: 3358

Test Date: Sep-2019

Test Sponsor: Inspur Corporation

Hardware Availability: Apr-2019

Tested by: Inspur Corporation

Software Availability: May-2019

## Platform Notes (Continued)

```
node distances:
node  0   1   2   3
 0: 10  11  21  21
 1: 11  10  21  21
 2: 21  21  10  11
 3: 21  21  11  10

From /proc/meminfo
MemTotal:      394570248 kB
HugePages_Total:       0
Hugepagesize:     2048 kB

/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 12 SP4

From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 4
# This file is deprecated and will be removed in a future service pack or release.
# Please check /etc/os-release for details about this release.
os-release:
NAME="SLES"
VERSION="12-SP4"
VERSION_ID="12.4"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP4"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp4"

uname -a:
Linux linux-mqjy 4.12.14-94.41-default #1 SMP Wed Oct 31 12:25:04 UTC 2018 (3090901)
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: __user pointer sanitization
CVE-2017-5715 (Spectre variant 2): Mitigation: Indirect Branch Restricted Speculation,
IBPB, IBRS_FW

run-level 3 Sep 12 07:19 last=5

SPEC is set to: /home/CPU2017
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdb3        xfs   407G   53G  355G  13%  /home
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Inspur Corporation

### Inspur NF5280M5 (Intel Xeon Gold 5218)

CPU2017 License: 3358

Test Sponsor: Inspur Corporation

Tested by: Inspur Corporation

SPECrate®2017\_fp\_base = 178

SPECrate®2017\_fp\_peak = 188

Test Date: Sep-2019

Hardware Availability: Apr-2019

Software Availability: May-2019

## Platform Notes (Continued)

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 American Megatrends Inc. 4.1.5 02/22/2019

Memory:

24x Hynix HMA82GR7JJR8N-WM 16 GB 2 rank 2933, configured at 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.cactusBSSN_r(base, peak)
-----
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.4.227 Build 20190416
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Inspur Corporation

SPECrate®2017\_fp\_base = 178

Inspur NF5280M5 (Intel Xeon Gold 5218)

SPECrate®2017\_fp\_peak = 188

CPU2017 License: 3358

Test Date: Sep-2019

Test Sponsor: Inspur Corporation

Hardware Availability: Apr-2019

Tested by: Inspur Corporation

Software Availability: May-2019

## Compiler Version Notes (Continued)

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.

=====

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

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Inspur Corporation

Inspur NF5280M5 (Intel Xeon Gold 5218)

SPECrate®2017\_fp\_base = 178

SPECrate®2017\_fp\_peak = 188

CPU2017 License: 3358

Test Sponsor: Inspur Corporation

Tested by: Inspur Corporation

Test Date: Sep-2019

Hardware Availability: Apr-2019

Software Availability: May-2019

## Base Compiler Invocation (Continued)

Benchmarks using Fortran, C, and C++:

```
icpc -m64icc -m64 -std=c11 ifort -m64
```

## Base Portability Flags

```
503.bwaves_r: -DSPEC_LP64
507.cactusBSSN_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
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Inspur Corporation

SPECrate®2017\_fp\_base = 178

Inspur NF5280M5 (Intel Xeon Gold 5218)

SPECrate®2017\_fp\_peak = 188

CPU2017 License: 3358

Test Date: Sep-2019

Test Sponsor: Inspur Corporation

Hardware Availability: Apr-2019

Tested by: Inspur Corporation

Software Availability: May-2019

## Base Optimization Flags (Continued)

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
```

## 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 -m64icc -m64 -std=c11
```

Benchmarks using Fortran, C, and C++:

```
icpc -m64icc -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
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Inspur Corporation

SPECrate®2017\_fp\_base = 178

Inspur NF5280M5 (Intel Xeon Gold 5218)

SPECrate®2017\_fp\_peak = 188

CPU2017 License: 3358

Test Date: Sep-2019

Test Sponsor: Inspur Corporation

Hardware Availability: Apr-2019

Tested by: Inspur Corporation

Software Availability: May-2019

## Peak Optimization Flags (Continued)

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

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



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Inspur Corporation

SPECrate®2017\_fp\_base = 178

Inspur NF5280M5 (Intel Xeon Gold 5218)

SPECrate®2017\_fp\_peak = 188

CPU2017 License: 3358

Test Date: Sep-2019

Test Sponsor: Inspur Corporation

Hardware Availability: Apr-2019

Tested by: Inspur Corporation

Software Availability: May-2019

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/Inspur-Platform-Settings-V1.3-SKL.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/Inspur-Platform-Settings-V1.3-SKL.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 v1.0.5 on 2019-09-12 16:27:52-0400.

Report generated on 2019-10-15 14:38:27 by CPU2017 PDF formatter v6255.

Originally published on 2019-10-15.