



# SPEC® CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SR950  
(3.50 GHz, Intel Xeon Gold 6144)

SPECrate2017\_fp\_base = 261

SPECrate2017\_fp\_peak = 268

CPU2017 License: 9017

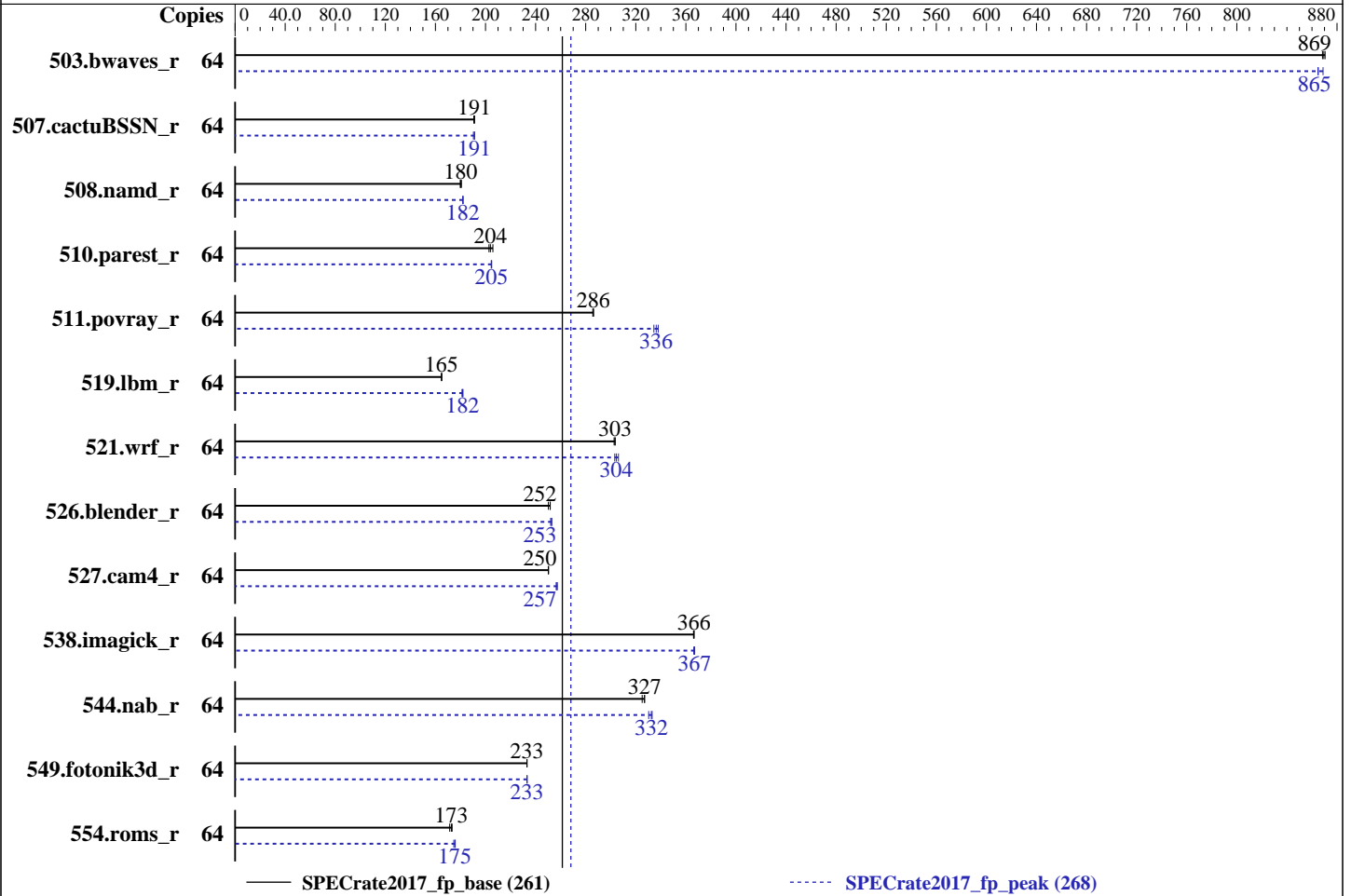
Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Jan-2018

Hardware Availability: Sep-2017

Software Availability: Sep-2017



### Hardware

CPU Name: Intel Xeon Gold 6144  
 Max MHz.: 4200  
 Nominal: 3500  
 Enabled: 32 cores, 4 chips, 2 threads/core  
 Orderable: 2,4 chips  
 Cache L1: 32 KB I + 32 KB D on chip per core  
 L2: 1 MB I+D on chip per core  
 L3: 24.75 MB I+D on chip per chip  
 Other: None  
 Memory: 1536 GB (48 x 32 GB 2Rx4 PC4-2666V-R)  
 Storage: 800 GB tmpfs  
 Other: None

### Software

OS: SUSE Linux Enterprise Server 12 SP2 (x86\_64)  
 Kernel 4.4.21-69-default  
 Compiler: 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: Lenovo BIOS Version PSE109O 1.11 released Dec-2017  
 File System: tmpfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 64-bit  
 Other: None



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## Results Table

| Benchmark       | Base   |                    |                   |                   |                   |                   |                   | Peak   |                    |                   |                   |                   |                   |                   |
|-----------------|--------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                 | Copies | Seconds            | Ratio             | Seconds           | Ratio             | Seconds           | Ratio             | Copies | Seconds            | Ratio             | Seconds           | Ratio             | Seconds           | Ratio             |
| 503.bwaves_r    | 64     | <b><u>738</u></b>  | <b><u>869</u></b> | 739               | 868               | 737               | 870               | 64     | 742                | 865               | <b><u>742</u></b> | <b><u>865</u></b> | 739               | 869               |
| 507.cactuBSSN_r | 64     | 425                | 191               | <b><u>424</u></b> | <b><u>191</u></b> | 424               | 191               | 64     | 424                | 191               | 426               | 190               | <b><u>424</u></b> | <b><u>191</u></b> |
| 508.namd_r      | 64     | 338                | 180               | 336               | 181               | <b><u>337</u></b> | <b><u>180</u></b> | 64     | 334                | 182               | <b><u>334</u></b> | <b><u>182</u></b> | 334               | 182               |
| 510.parest_r    | 64     | 813                | 206               | <b><u>821</u></b> | <b><u>204</u></b> | 826               | 203               | 64     | 817                | 205               | 818               | 205               | <b><u>818</u></b> | <b><u>205</u></b> |
| 511.povray_r    | 64     | 523                | 286               | 522               | 286               | <b><u>522</u></b> | <b><u>286</u></b> | 64     | 442                | 338               | 447               | 334               | <b><u>444</u></b> | <b><u>336</u></b> |
| 519.lbm_r       | 64     | 409                | 165               | 409               | 165               | <b><u>409</u></b> | <b><u>165</u></b> | 64     | 372                | 181               | <b><u>371</u></b> | <b><u>182</u></b> | 371               | 182               |
| 521.wrf_r       | 64     | <b><u>473</u></b>  | <b><u>303</u></b> | 472               | 304               | 474               | 303               | 64     | 473                | 303               | <b><u>471</u></b> | <b><u>304</u></b> | 468               | 306               |
| 526.blender_r   | 64     | <b><u>387</u></b>  | <b><u>252</u></b> | 390               | 250               | 387               | 252               | 64     | 387                | 252               | 385               | 253               | <b><u>386</u></b> | <b><u>253</u></b> |
| 527.cam4_r      | 64     | 448                | 250               | <b><u>447</u></b> | <b><u>250</u></b> | 447               | 250               | 64     | <b><u>436</u></b>  | <b><u>257</u></b> | 435               | 257               | 436               | 257               |
| 538.imagick_r   | 64     | 435                | 366               | 434               | 367               | <b><u>434</u></b> | <b><u>366</u></b> | 64     | 435                | 366               | <b><u>434</u></b> | <b><u>367</u></b> | 434               | 367               |
| 544.nab_r       | 64     | 329                | 327               | <b><u>329</u></b> | <b><u>327</u></b> | 331               | 325               | 64     | 326                | 330               | 323               | 333               | <b><u>324</u></b> | <b><u>332</u></b> |
| 549.fotonik3d_r | 64     | <b><u>1070</u></b> | <b><u>233</u></b> | 1070              | 233               | 1070              | 233               | 64     | <b><u>1070</u></b> | <b><u>233</u></b> | 1069              | 233               | 1070              | 233               |
| 554.roms_r      | 64     | 587                | 173               | <b><u>589</u></b> | <b><u>173</u></b> | 593               | 171               | 64     | 582                | 175               | <b><u>580</u></b> | <b><u>175</u></b> | 578               | 176               |

SPECrate2017\_fp\_base = 261

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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"  
Tmpfs filesystem can be set with:  
mount -t tmpfs -o size=800g tmpfs /home  
Process tuning setting:  
echo 50000 > /proc/sys/kernel/sched\_cfs\_bandwidth\_slice\_us  
echo 240000000 > /proc/sys/kernel/sched\_latency\_ns  
echo 5000000 > /proc/sys/kernel/sched\_migration\_cost\_ns  
echo 100000000 > /proc/sys/kernel/sched\_min\_granularity\_ns  
echo 150000000 > /proc/sys/kernel/sched\_wakeup\_granularity\_ns  
echo 0 > /proc/sys/kernel/numa\_balancing

## General Notes

Environment variables set by runcpu before the start of the run:  
LD\_LIBRARY\_PATH = "/home/cpu2017.1.0.2.ic18.0/lib/ia32:/home/cpu2017.1.0.2.ic18.0/lib/intel64"  
LD\_LIBRARY\_PATH = "\$LD\_LIBRARY\_PATH:/home/cpu2017.1.0.2.ic18.0/je5.0.1-32:/home/cpu2017.1.0.2.ic18.0/je5.0.1-64"

(Continued on next page)



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**Software Availability:** Sep-2017

## General Notes (Continued)

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>
```

No: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

No: 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.

No: 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.

This benchmark result is intended to provide perspective on past performance using the historical hardware and/or software described on this result page.

The system as described on this result page was formerly generally available. At the time of this publication, it may not be shipping, and/or may not be supported, and/or may fail to meet other tests of General Availability described in the SPEC OSG Policy document, <http://www.spec.org/osg/policy.html>

This measured result may not be representative of the result that would be measured were this benchmark run with hardware and software available as of the publication date.

## Platform Notes

BIOS configuration:

Choose Operating Mode set to Maximum Performance

SNC set to Enable

MONITORM/WAIT set to Enable

Execute Disable Bit set to Disable

Intel Virtualization Technology set to Disable

DCA set to Enable

XPT Prefetcher set to Enable

Sysinfo program /home/cpu2017.1.0.2.ic18.0/bin/sysinfo

Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f

running on linux-ciok Tue Jan 9 16:47:56 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>

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### Platform Notes (Continued)

```

From /proc/cpuinfo
model name      : Intel(R) Xeon(R) Gold 6144 CPU @ 3.50GHz
 4 "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      : 8
siblings       : 16
physical 0:    : cores 4 8 9 11 16 18 19 25
physical 1:    : cores 0 2 3 9 16 19 26 27
physical 2:    : cores 0 2 3 9 16 19 26 27
physical 3:    : cores 0 2 3 9 16 19 26 27

```

```

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:  8
Socket(s):       4
NUMA node(s):    8
Vendor ID:       GenuineIntel
CPU family:      6
Model:          85
Model name:      Intel(R) Xeon(R) Gold 6144 CPU @ 3.50GHz
Stepping:        4
CPU MHz:         3491.803
BogoMIPS:        6983.60
Virtualization:  VT-x
L1d cache:      32K
L1i cache:      32K
L2 cache:       1024K
L3 cache:       25344K
NUMA node0 CPU(s):  0-2,7,33,34,36,39
NUMA node1 CPU(s):  3-6,32,35,37,38
NUMA node2 CPU(s):  8,9,11,12,40,41,43,44
NUMA node3 CPU(s):  10,13-15,42,45-47
NUMA node4 CPU(s):  16,17,19,20,48,49,51,52
NUMA node5 CPU(s):  18,21-23,50,53-55
NUMA node6 CPU(s):  24,25,27,28,56,57,59,60
NUMA node7 CPU(s):  26,29-31,58,61-63
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

```

(Continued on next page)



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### Platform Notes (Continued)

aperfmpperf eagerfpu pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 sse3 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 ida arat epb pln pts dtherm intel\_pt  
tpr\_shadow vnmi flexpriority ept vpid fsgsbase tsc\_adjust bml1 hle avx2 smep bmi2  
erms invpcid rtm cqm mpx avx512f avx512dq rdseed adx smap clflushopt clwb avx512cd  
avx512bw avx512vl xsaveopt xsavec xgetbv1 cqm\_llc cqm\_occup\_llc

```
/proc/cpuinfo cache data
cache size : 25344 KB
```

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a physical chip.

```
available: 8 nodes (0-7)
node 0 cpus: 0 1 2 7 33 34 36 39
node 0 size: 192979 MB
node 0 free: 183976 MB
node 1 cpus: 3 4 5 6 32 35 37 38
node 1 size: 193521 MB
node 1 free: 192746 MB
node 2 cpus: 8 9 11 12 40 41 43 44
node 2 size: 193521 MB
node 2 free: 193020 MB
node 3 cpus: 10 13 14 15 42 45 46 47
node 3 size: 193521 MB
node 3 free: 193016 MB
node 4 cpus: 16 17 19 20 48 49 51 52
node 4 size: 193521 MB
node 4 free: 193017 MB
node 5 cpus: 18 21 22 23 50 53 54 55
node 5 size: 193521 MB
node 5 free: 188045 MB
node 6 cpus: 24 25 27 28 56 57 59 60
node 6 size: 193521 MB
node 6 free: 193020 MB
node 7 cpus: 26 29 30 31 58 61 62 63
node 7 size: 193516 MB
node 7 free: 192981 MB
```

```
node distances:
node  0  1  2  3  4  5  6  7
 0:  10  11  21  21  21  21  21  21
 1:  11  10  21  21  21  21  21  21
 2:  21  21  10  11  21  21  21  21
 3:  21  21  11  10  21  21  21  21
 4:  21  21  21  21  10  11  21  21
 5:  21  21  21  21  11  10  21  21
 6:  21  21  21  21  21  21  10  11
 7:  21  21  21  21  21  21  11  10
```

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### Platform Notes (Continued)

```

From /proc/meminfo
MemTotal:      1584766272 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 2
# 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-SP2"
VERSION_ID="12.2"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp2"

uname -a:
Linux linux-ciok 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016 (9464f67)
x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jan 9 16:46

SPEC is set to: /home/cpu2017.1.0.2.ic18.0
Filesystem      Type      Size  Used Avail Use% Mounted on
tmpfs            tmpfs     800G   11G  790G   2% /home

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 Lenovo  -[PSE1090-1.11]- 12/12/2017
Memory:
48x NO DIMM NO DIMM
48x Samsung M393A4K40BB2-CTD 32 GB 2 rank 2666

(End of data from sysinfo program)

```



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### 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.  
-----

=====  
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)  
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icpc (ICC) 18.0.0 20170811  
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=====  
CC 511.povray\_r(base) 526.blender\_r(base)  
-----

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CC 511.povray\_r(peak) 526.blender\_r(peak)  
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FC 507.cactuBSSN\_r(base)

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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 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)

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```
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.
```

## 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
```



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## 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  
-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



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**Test Sponsor:** Lenovo Global Technology

**Tested by:** Lenovo Global Technology

**Test Date:** Jan-2018

**Hardware Availability:** Sep-2017

**Software Availability:** Sep-2017

## 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

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: -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:

-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

Fortran benchmarks:

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

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**Lenovo Global Technology**

ThinkSystem SR950  
(3.50 GHz, Intel Xeon Gold 6144)

SPECrate2017\_fp\_base = 261

SPECrate2017\_fp\_peak = 268

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## Peak Optimization Flags (Continued)

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++:

-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

## Peak 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

(Continued on next page)



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## Peak Other Flags (Continued)

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.html>

<http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-SKL-A.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.xml>

<http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-SKL-A.xml>

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Tested with SPEC CPU2017 v1.0.2 on 2018-01-09 03:47:55-0500.

Report generated on 2018-10-31 16:46:16 by CPU2017 PDF formatter v6067.

Originally published on 2018-03-06.