## Lenovo Global Technology

### SPEC CPU®2017 Floating Point Rate Result

**Lenovo Global Technology**

ThinkSystem SN550 V2
(2.00 GHz, Intel Xeon Gold 6330)

**SPECrate®2017_fp_base = 347**

**SPECrate®2017_fp_peak = Not Run**

**CPU2017 License:** 9017  
**Test Date:** May-2021

**Test Sponsor:** Lenovo Global Technology  
**Hardware Availability:** Jul-2021

**Tested by:** Lenovo Global Technology  
**Software Availability:** Feb-2021

### Hardware

| Test | Copies | 45.0 | 90.0 | 135 | 180 | 225 | 270 | 315 | 360 | 405 | 450 | 495 | 540 | 585 | 630 | 675 | 720 | 765 | 810 | 855 | 900 | 945 | 990 | 1035 | 1080 | 1125 | 1170 | 1215 | 1260 | 1305 | 1350 | 1395 | 1440 |
|------|--------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 503.bwaves_r | 112 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 507.cactuBSSN_r | 112 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | 482 | -   | -   | -   | -   |
| 508.namd_r | 112 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 510.parest_r | 112 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | 398 |
| 511.povray_r | 112 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | 243 | -   | -   | -   |
| 519.lbm_r | 112 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | 305 |
| 521.wrf_r | 112 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | 377 | -   | -   | -   | 305 |
| 526.blender_r | 112 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | 370 |
| 527.cam4_r | 112 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | 305 |
| 538.imagick_r | 112 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | 140 |
| 544.nab_r | 112 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   |
| 549.fotonik3d_r | 112 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | 305 |
| 554.roms_r | 112 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | 140 |

---

**Software**

| OS: | Red Hat Enterprise Linux 8.3 (Ootpa)  
Kernel 4.18.0-240.el8.x86_64 |
|-----|-----------------------------------|
| Compiler: | C/C++: Version 2021.1 of Intel oneAPI DPC++/C++  
Compiler Build 20201113 for Linux;  
Fortran: Version 2021.1 of Intel Fortran Compiler |
| Firmware: | Lenovo BIOS Version U8E109PT1 1.01 released Apr-2021 |
| File System: | xfs |
| System State: | Run level 3 (multi-user) |
| Base Pointers: | 64-bit |
| Peak Pointers: | Not Applicable |
| Power Management: | BIOS and OS set to prefer performance at the cost of additional power usage |

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**Hardware**

| CPU Name: | Intel Xeon Gold 6330 |
| Max MHz: | 3100 |
| Nominal: | 2000 |
| Enabled: | 56 cores, 2 chips, 2 threads/core |
| Orderable: | 1,2 chips |
| Cache L1: | 32 KB I + 48 KB D on chip per core |
| L2: | 1.25 MB I+D on chip per core |
| L3: | 42 MB I+D on chip per chip |
| Other: | None |
| Memory: | 512 GB (16 x 32 GB 2Rx8 PC4-3200AA-R, running at 2933) |
| Storage: | 1 x 960 GB SATA SSD |
| Other: | None |
Lenovo Global Technology
ThinkSystem SN550 V2
(2.00 GHz, Intel Xeon Gold 6330)

CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Results Table

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</tbody>
</table>

SPECrate®2017_fp_base = 347
SPECrate®2017_fp_peak = Not Run

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"

Environment Variables Notes

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

```
LD_LIBRARY_PATH = "/home/cpu2017-1.1.5-ic2021.1-revB/lib/intel64:/home/cpu2017-1.1.5-ic202
1.1-revB/je5.0.1-64"
MALLOCONF = "retain:true"
```

General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Red Hat Enterprise Linux 8.1
Transparent Huge Pages enabled by default

(Continued on next page)
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ThinkSystem SN550 V2
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SPECrates
SPEC®2017_fp_base = 347
SPEC®2017_fp_peak = Not Run

General Notes (Continued)

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) 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.

ejemalloc, a general purpose malloc implementation
built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

Platform Notes

BIOS configuration:
Choose Operating Mode set to Maximum Performance and then set it to Custom Mode
MONITOR/MWAIT set to Enabled
CPU P-state Control set to Legacy
Cl Enhanced Mode set to Enabled
Intel Virtualization Technology set to Disabled
SNC set to Enabled
XPT Prefetcher set to Disabled
UPI Prefetcher set to Disabled

Sysinfo program /home/cpu2017-1.1.5-ic2021.1-revB/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c
running on localhost.localdomain Fri May 14 01:13:20 2021

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 6330 CPU @ 2.00GHz
  2 "physical id" s (chips)
112 "processors"
core , siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
cpu cores : 28
siblings : 56
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

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Lenovo Global Technology
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CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
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SPECrate®2017_fp_base = 347
SPECrate®2017_fp_peak = Not Run

Test Date: May-2021
Hardware Availability: Jul-2021
Software Availability: Feb-2021

Platform Notes (Continued)

25 26 27

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 112
On-line CPU(s) list: 0-111
Thread(s) per core: 2
Core(s) per socket: 28
Socket(s): 2
NUMA node(s): 4
Vendor ID: GenuineIntel
CPU family: 6
Model: 106
Model name: Intel(R) Xeon(R) Gold 6330 CPU @ 2.00GHz
Stepping: 6
CPU MHz: 2600.000
CPU max MHz: 2001.0000
CPU min MHz: 800.0000
BogoMIPS: 4000.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 1280K
L3 cache: 43008K
NUMA node0 CPU(s): 0-13, 56-69
NUMA node1 CPU(s): 14-27, 70-83
NUMA node2 CPU(s): 28-41, 84-97
NUMA node3 CPU(s): 42-55, 98-111
Flags: fpu vme de pse tsc msr pae mce cmov cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant_tsc arch_perfmon pebs bts rep_good nopl nonstop_tsc cpuid aperfmperf pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pclid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 invpcid_single intel_pni ssbd mbx ibrs ibpb ibrs neighbouring fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erson invpcid cmq rdt_a avx512f avx512dq rdseed adx smap avx512sfma clflushopt clwb intel_pt avx512cd sha_ha avx512bw avx512v1 xsaveopt xsaveopt xsaves cmq_l1c cmq_odd crab cmq_memory_total cmq_memory_local split_lock_detect wbinvd dtc so ida arat pln pts avx512vmbmi umip pku ospk avx512vpdmi qfn1 vaes vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid md_clear pconfig flush_lld arch_capabilities

/proc/cpuinfo cache data
  cache size : 43008 KB

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LENNOVO GLOBAL TECHNOLOGY

THINKSYSTEM SN550 V2
(2.00 GHz, Intel Xeon Gold 6330)

CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

SPECrate®2017_fp_base = 347
SPECrate®2017_fp_peak = Not Run

Test Date: May-2021
Hardware Availability: Jul-2021
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Platform Notes (Continued)

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 4 5 6 7 8 9 10 11 12 13 56 57 58 59 60 61 62 63 64 65 66 67 68 69
node 0 size: 125481 MB
node 0 free: 127888 MB
node 1 cpus: 14 15 16 17 18 19 20 21 22 23 24 25 26 27 70 71 72 73 74 75 76 77 78 79 80
81 82 83
node 1 size: 126069 MB
node 1 free: 128516 MB
node 2 cpus: 28 29 30 31 32 33 34 35 36 37 38 39 40 41 84 85 86 87 88 89 90 91 92 93 94
95 96 97
node 2 size: 126009 MB
node 2 free: 128276 MB
node 3 cpus: 42 43 44 45 46 47 48 49 50 51 52 53 54 55 98 99 100 101 102 103 104 105
106 107 108 109 110 111
node 3 size: 126319 MB
node 3 free: 128435 MB
node distances:
node 0 1 2 3
0: 10 11 20 20
1: 11 10 20 20
2: 20 20 10 11
3: 20 20 11 10

From /proc/meminfo
MemTotal: 527863888 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/sbin/tuned-adm active
Current active profile: throughput-performance
/sys/devices/system/cpu/cpu*/cpufreq/scaling_governor has performance

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

os=release:
NAME="Red Hat Enterprise Linux"
VERSION="8.3 (Ootpa)"
ID=rhel
ID_LIKE="fedora"
VERSION_ID="8.3"
PLATFORM_ID="platform:el8"
PRETTY_NAME="Red Hat Enterprise Linux 8.3 (Ootpa)"
ANSI_COLOR="0;31"
redhat-release: Red Hat Enterprise Linux release 8.3 (Ootpa)

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Lenovo Global Technology
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(2.00 GHz, Intel Xeon Gold 6330)

SPEC®2017 Floating Point Rate Result

| SPECrate®2017_fp_base | 347 |
| SPECrate®2017_fp_peak | Not Run |

CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Test Date: May-2021
Tested by: Lenovo Global Technology
Hardware Availability: Jul-2021
Software Availability: Feb-2021

Platform Notes (Continued)

```
system-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
system-release-cpe: cpe:/o:redhat:enterprise_linux:8.3:ga
uname -a: 
    Linux localhost.localdomain 4.18.0-240.el8.x86_64 #1 SMP Wed Sep 23 05:13:10 EDT 2020
    x86_64 x86_64 x86_64 GNU/Linux
```

Kernel self-reported vulnerability status:

- CVE-2018-12207 (iTLB Multihit): Not affected
- CVE-2018-3620 (L1 Terminal Fault): Not affected
- Microarchitectural Data Sampling: Not affected
- CVE-2017-5754 (Meltdown): Mitigation: Speculative Store Bypass disabled via prct1 and seccomp
- CVE-2018-3639 (Speculative Store Bypass): 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
- CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
- CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 3 May 13 15:48

SPEC is set to: /home/cpu2017-1.1.5-ic2021.1-revB

```
Filesystem     Type  Size  Used Avail Use% Mounted on
/dev/sda4      xfs   818G   15G  803G   2% /home
```

From /sys/devices/virtual/dmi/id
Vendor: Lenovo
Product: ThinkSystem SN550 V2
Product Family: ThinkSystem
Serial: 1234567890

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: 16x Samsung M393A4G43AB3-CWE 32 GB 2 rank 3200, configured at 2933

BIOS:
  BIOS Vendor: Lenovo
  BIOS Version: U8E109PT1-1.01
  BIOS Date: 04/28/2021

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Lenovo Global Technology
ThinkSystem SN550 V2
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SPECrating

Copyright 2017-2021 Standard Performance Evaluation Corporation

Lenovo Global Technology

CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

BIOS Revision: 1.1
Firmware Revision: 1.40

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
C               | 519.lbm_r(base) 538.imagick_r(base) 544.nab_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

C++             | 508.namd_r(base) 510.parest_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

C++, C          | 511.povray_r(base) 526.blender_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

C++, C, Fortran | 507.cactuBSSN_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on
Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

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### Compiler Version Notes (Continued)

```
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| Fortran         | 503.bwaves_r(base) 549.fotonik3d_r(base) 554.roms_r(base) |
------------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on
Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

------------------------------------------------------------------------------
| Fortran, C      | 521.wrf_r(base) 527.cam4_r(base) |
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Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on
Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20210113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
```

### Base Compiler Invocation

- **C benchmarks:**
  - icx

- **C++ benchmarks:**
  - icpx

- **Fortran benchmarks:**
  - ifort

- **Benchmarks using both Fortran and C:**
  - ifort icx

- **Benchmarks using both C and C++:**
  - icpx icx

- **Benchmarks using Fortran, C, and C++:**
  - icpx icx ifort
Lenovo Global Technology
ThinkSystem SN550 V2
(2.00 GHz, Intel Xeon Gold 6330)

<table>
<thead>
<tr>
<th>Spec CPU®2017 Floating Point Rate Result</th>
<th>SPECrate®2017_fp_base = 347</th>
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- CPU2017 License: 9017 |
- Test Sponsor: Lenovo Global Technology |
- Tested by: Lenovo Global Technology |
- Test Date: May-2021 |
- Hardware Availability: Jul-2021 |
- Software Availability: Feb-2021 |

<table>
<thead>
<tr>
<th>Base Portability Flags</th>
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<tbody>
<tr>
<td>503.bwaves_r: -DSPEC_LP64</td>
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<td>507.cactuBSSN_r: -DSPEC_LP64</td>
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<td>508.namd_r: -DSPEC_LP64</td>
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<td>510.parest_r: -DSPEC_LP64</td>
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<td>511.povray_r: -DSPEC_LP64</td>
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<td>519.lbm_r: -DSPEC_LP64</td>
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<td>521.wrf_r: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian</td>
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<td>526.blender_r: -DSPEC_LP64 -DSPEC_LINUX -funsigned-char</td>
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<td>527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG</td>
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<td>538.imagick_r: -DSPEC_LP64</td>
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<td>544.nab_r: -DSPEC_LP64</td>
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<td>549.fotonik3d_r: -DSPEC_LP64</td>
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<td>554.roms_r: -DSPEC_LP64</td>
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<td>C benchmarks:</td>
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<tr>
<td>-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math</td>
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<tr>
<td>-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4</td>
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<tr>
<td>-mbranches-within-32B-boundaries -ljemalloc</td>
</tr>
<tr>
<td>-L/usr/local/jemalloc64-5.0.1/lib</td>
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</table>

| C++ benchmarks: |
| -w -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math -flto |
| -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 |
| -mbranches-within-32B-boundaries -ljemalloc |
| -L/usr/local/jemalloc64-5.0.1/lib |

| Fortran benchmarks: |
| -w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ipo -no-prec-div |
| -qopt-prefetch -ffinite-math-only |
| -qopt-multiple-gather-scatter-by-shuffles -qopt-mem-layout-trans=4 |
| -nostandard-realloc-lhs -align array32byte -auto |
| -mbranches-within-32B-boundaries -ljemalloc |
| -L/usr/local/jemalloc64-5.0.1/lib |

| Benchmarks using both Fortran and C: |
| -w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math |
| -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -O3 -ipo |
| -no-prec-div -qopt-prefetch -ffinite-math-only |
| -qopt-multiple-gather-scatter-by-shuffles |
| -mbranches-within-32B-boundaries -nostandard-realloc-lhs |
| -align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib |

(Continued on next page)
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**Base Optimization Flags (Continued)**

Benchmarks using both C and C++:
- `-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math`
- `-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4`
- `-mbranches-within-32B-boundaries -ljemalloc`
- `-L/usr/local/jemalloc64-5.0.1/lib`

Benchmarks using Fortran, C, and C++:
- `-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math`
- `-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -O3`
- `-no-prec-div -qopt-prefetch -ffinite-math-only`
- `-qopt-multiple-gather-scatter-by-shuffles`
- `-mbranches-within-32B-boundaries -nostandard-realloc-lhs`
- `-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib`

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

http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-ICElake-D.html

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

http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-ICElake-D.xml
http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.xml

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For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

Tested with SPEC CPU®2017 v1.1.5 on 2021-05-13 13:13:20-0400.
Report generated on 2021-06-08 20:02:33 by CPU2017 PDF formatter v6442.
Originally published on 2021-06-08.