Lenovo Global Technology
ThinkSystem ST250
(3.80 GHz, Intel Xeon E-2244G)

**CPU2017 License:** 9017
**Test Sponsor:** Lenovo Global Technology
**Tested by:** Lenovo Global Technology
**Test Date:** Jun-2020

---

**Hardware**

- **CPU Name:** Intel Xeon E-2244G
- **Max MHz:** 4800
- **Nominal:** 3800
- **Enabled:** 4 cores, 1 chip, 2 threads/core
- **Orderable:** 1 chip
- **Cache L1:** 32 KB I + 32 KB D on chip per core
- **L2:** 256 KB I+D on chip per core
- **L3:** 8 MB I+D on chip per chip
- **Other:** None
- **Memory:** 128 GB (4 x 32 GB 2Rx4 PC4-2666V-E)
- **Storage:** 1 x 960 GB SATA SSD
- **Other:** None

**Software**

- **OS:** SUSE Linux Enterprise Server 15 SP1 (x86_64)
- **Kernel:** 4.12.14-195-default
- **Compiler:** C/C++: Version 19.1.1.217 of Intel
  C/C++ Compiler for Linux;
  Fortran: Version 19.1.1.217 of Intel Fortran
  Compiler for Linux
- **Parallel:** No
- **Firmware:** Lenovo BIOS Version ISE115D 2.10 released Apr-2020
- **File System:** xfs
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 64-bit
- **Peak Pointers:** 32/64-bit
- **Other:** jemalloc memory allocator V5.0.1
- **Power Management:** BIOS set to prefer performance at the cost of additional power usage
## Lenovo Global Technology

ThinkSystem ST250
(3.80 GHz, Intel Xeon E-2244G)

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>9017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>Lenovo Global Technology</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Lenovo Global Technology</td>
</tr>
<tr>
<td>Test Date:</td>
<td>Jun-2020</td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>Mar-2020</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Apr-2020</td>
</tr>
</tbody>
</table>

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>500/perlbench_r</td>
<td>8</td>
<td>492</td>
<td>25.9</td>
<td>494</td>
<td>25.8</td>
<td>494</td>
<td>25.8</td>
<td>8</td>
<td>404</td>
<td>31.5</td>
<td>405</td>
<td>31.4</td>
</tr>
<tr>
<td>502/gcc_r</td>
<td>8</td>
<td>353</td>
<td>32.1</td>
<td>350</td>
<td>32.3</td>
<td>351</td>
<td>32.2</td>
<td>8</td>
<td>302</td>
<td>37.6</td>
<td>302</td>
<td>37.5</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>8</td>
<td>205</td>
<td>62.9</td>
<td>207</td>
<td>62.5</td>
<td>206</td>
<td>62.7</td>
<td>8</td>
<td>205</td>
<td>62.9</td>
<td>207</td>
<td>62.5</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>8</td>
<td>523</td>
<td>20.1</td>
<td>519</td>
<td>20.2</td>
<td>521</td>
<td>20.1</td>
<td>8</td>
<td>523</td>
<td>20.1</td>
<td>519</td>
<td>20.2</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>8</td>
<td>174</td>
<td>48.7</td>
<td>174</td>
<td>48.4</td>
<td>174</td>
<td>48.6</td>
<td>8</td>
<td>174</td>
<td>48.7</td>
<td>174</td>
<td>48.4</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>8</td>
<td>172</td>
<td>81.3</td>
<td>172</td>
<td>81.4</td>
<td>174</td>
<td>80.7</td>
<td>8</td>
<td>166</td>
<td>84.2</td>
<td>167</td>
<td>84.0</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>8</td>
<td>304</td>
<td>30.2</td>
<td>301</td>
<td>30.4</td>
<td>304</td>
<td>30.2</td>
<td>8</td>
<td>304</td>
<td>30.2</td>
<td>301</td>
<td>30.4</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>8</td>
<td>471</td>
<td>28.1</td>
<td>471</td>
<td>28.1</td>
<td>471</td>
<td>28.1</td>
<td>8</td>
<td>471</td>
<td>28.1</td>
<td>471</td>
<td>28.1</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>8</td>
<td>274</td>
<td>76.5</td>
<td>283</td>
<td>74.0</td>
<td>287</td>
<td>73.1</td>
<td>8</td>
<td>274</td>
<td>76.5</td>
<td>283</td>
<td>74.0</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>8</td>
<td>406</td>
<td>21.3</td>
<td>405</td>
<td>21.3</td>
<td>405</td>
<td>21.3</td>
<td>8</td>
<td>413</td>
<td>20.9</td>
<td>414</td>
<td>20.9</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 37.5**
**SPECrate®2017_int_peak = 38.9**

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

### Compiler Notes

The inconsistent Compiler version information under Compiler Version section is due to a discrepancy in Intel Compiler. The correct version of C/C++ compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux. The correct version of Fortran compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux.

### 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/cpu2017-1.1.0-ic19.1.1/lib/intel64:/home/cpu2017-1.1.0-ic19.1.1/lib/ia32:/home/cpu2017-1.1.0-ic19.1.1/je5.0.1-32"
MALLOCONF = "retain:true"
```
## General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Redhat Enterprise Linux 8.0
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
```
Yes: 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 configuration:
Choose Operating Mode set to Maximum Performance and then set it to Custom Mode
Energy Efficient Turbo set to Enable
Zero Output set to Advanced Mode
Intel Virtualization Technology set to Disable

Sysinfo program /home/cpu2017-1.1.0-ic19.1.1/bin/sysinfo
Rev: r6365 of 2019-08-21 295195f888a3d9ed9d1e6e46a485a0011
running on linux-bfbk Fri Jun 26 19:43:21 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) E-2244G CPU @ 3.80GHz
 1 "physical id"s (chips)
 8 "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 : 4
siblings : 8
physical 0: cores 0 1 2 3
```

From lscpu:
```
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
```

---

(Continued on next page)
Lenovo Global Technology

ThinkSystem ST250
(3.80 GHz, Intel Xeon E-2244G)

SPEC®2017 Integer Rate Result

SPECrade®2017_int_base = 37.5
SPECrade®2017_int_peak = 38.9

Copyright 2017-2020 Standard Performance Evaluation Corporation

Platform Notes (Continued)

Address sizes: 39 bits physical, 48 bits virtual
CPU(s): 8
On-line CPU(s) list: 0-7
Thread(s) per core: 2
Core(s) per socket: 4
Socket(s): 1
NUMA node(s): 1
Vendor ID: GenuineIntel
CPU family: 6
Model: 158
Model name: Intel(R) Xeon(R) E-2244G CPU @ 3.80GHz
Stepping: 10
CPU MHz: 3800.000
CPU max MHz: 4800.0000
CPU min MHz: 800.0000
BogoMIPS: 7584.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 256K
L3 cache: 8192K
NUMA node0 CPU(s): 0-7
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 rdtsscp
      lm constant_tsc arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc cpuid
      aperfmperf tsc_known_freq pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3
      sdbg fma cx16 xtpr pdcm pcid sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer
      aes xsave avx f16c rdrand lahf_lm abm 3nowprefetch cpuid_fault epb invpcid_single
      pti ssbd ibrs ibpb stibp tpr_shadow vnmi flexpriority ept vpid fsgsbase tsc_adjust
      bmi1 hle avx2 smep bmi2 erms invpcid rtm mpx rdseed adx smap clflushopt intel_pt
      xsaveopt xsavec xgetbv1 xsavees dtherm ida arat pln pts hwp hwp_notify hwp_act_window
      hwp_epp md_clear flush_l1d

/cache data

cache size : 8192 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
node 0 size: 128866 MB
node 0 free: 128301 MB
node distances:
  node 0
  0: 10

From /proc/meminfo

(Continued on next page)
Lenovo Global Technology
ThinkSystem ST250
(3.80 GHz, Intel Xeon E-2244G)

SPECrates®

SPECrates®

Lenovo Global Technology

Lenovo Global Technology

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

Test Date: Jun-2020
Hardware Availability: Mar-2020
Software Availability: Apr-2020

Platform Notes (Continued)

MemTotal: 131959284 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

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

os-release:
NAME="SLES"
VERSION="15-SP1"
VERSION_ID="15.1"
PRETTY_NAME="SUSE Linux Enterprise Server 15 SP1"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15:sp1"

uname -a:
Linux linux-bfbk 4.12.14-195-default #1 SMP Tue May 7 10:55:11 UTC 2019 (8fba516)
x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-3620 (L1 Terminal Fault): Mitigation: PTE Inversion; VMX: conditional
cache flushes, SMT vulnerable
Microarchitectural Data Sampling: Mitigation: Clear CPU buffers; SMT vulnerable
CVE-2017-5754 (Meltdown): Mitigation: PTI
CVE-2018-3639 (Speculative Store Bypass): Mitigation: Speculative Store Bypass disabled
via prctl and seccomp
CVE-2017-5753 (Spectre variant 1): Mitigation: __user pointer sanitization
CVE-2017-5715 (Spectre variant 2): Mitigation: Indirect Branch Restricted
Speculation, IBPB: conditional, IBRS_FW, STIBP: conditional, RSB filling

run-level 3 Jun 26 19:42

SPEC is set to: /home/cpu2017-1.1.0-ic19.1.1

From /sys/devices/virtual/dmi/id
BIOS: Lenovo -[ISE115D-2.10]- 04/24/2020
Vendor: Lenovo
Product: ThinkSystem ST250 -[7Y45CT00WW]-
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
## Lenovo Global Technology

ThinkSystem ST250  
(3.80 GHz, Intel Xeon E-2244G)

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base = 37.5</th>
<th>SPECrate®2017_int_peak = 38.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU2017 License: 9017</td>
<td>Test Date: Jun-2020</td>
</tr>
<tr>
<td>Test Sponsor: Lenovo Global Technology</td>
<td>Hardware Availability: Mar-2020</td>
</tr>
<tr>
<td>Tested by: Lenovo Global Technology</td>
<td>Software Availability: Apr-2020</td>
</tr>
</tbody>
</table>

### Platform Notes (Continued)

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:

4x SK Hynix HMAA4GU7AJR8N-VK 32767 MB 2 rank 2666

(END of data from sysinfo program)

### Compiler Version Notes

<table>
<thead>
<tr>
<th>Compiler Version</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>502.gcc_r(peak)</td>
<td>Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen Build 20200304 Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
<tr>
<td>500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak) 557.xz_r(base)</td>
<td>Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1 NextGen Build 20200304 Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
<tr>
<td>500.perlbench_r(peak) 557.xz_r(peak)</td>
<td>Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.1.1.217 Build 20200306 Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
<tr>
<td>502.gcc_r(peak)</td>
<td>Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen Build 20200304 Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
<tr>
<td>500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak) 557.xz_r(base)</td>
<td>Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1 NextGen Build 20200304 Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
</tbody>
</table>

(Continued on next page)
Lenovo Global Technology
ThinkSystem ST250
(3.80 GHz, Intel Xeon E-2244G)

SPECrate®2017_int_base = 37.5
SPECrate®2017_int_peak = 38.9

Lenovo Global Technology

Compiler Version Notes (Continued)

Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
| C       | 500.perlbench_r(peak) 557.xz_r(peak) |
==============================================================================

Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen
Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
| C       | 502.gcc_r(peak) |
==============================================================================

Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen
Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
| C       | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak) |
|         | 525.x264_r(base, peak) 557.xz_r(base) |
==============================================================================

Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
| C       | 500.perlbench_r(peak) 557.xz_r(peak) |
==============================================================================

Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
| C++     | 520.omnetpp_r(base, peak) 523.xalancbmk_r(base, peak) |
|         | 531.deepsjeng_r(base, peak) 541.leela_r(base, peak) |
==============================================================================

Intel(R) C++ Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

(Continued on next page)
Lenovo Global Technology

ThinkSystem ST250
(3.80 GHz, Intel Xeon E-2244G)

SPECrate®2017_int_base = 37.5
SPECrate®2017_int_peak = 38.9

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

Test Date: Jun-2020
Hardware Availability: Mar-2020
Software Availability: Apr-2020

Compiler Version Notes (Continued)

Fortran | 548.exchange2_r(base, peak)
-----------------------------------------------------------------------------
Intel (R) Fortran Intel (R) 64 Compiler for applications running on Intel(R)
  64, Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
-----------------------------------------------------------------------------

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Base Portability Flags

500.perlbench_r: -DSPEC_LP64
502.gcc_r: -DSPEC_LP64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-m64 -qnextgen -std=c11
-W1,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-xcORE-AVX2 -O3 -ffast-math -flto -mfpmath=sse -funroll-loops
-fuse-ld=gold -qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-1qkmalloc

(Continued on next page)
Lenovo Global Technology
ThinkSystem ST250
(3.80 GHz, Intel Xeon E-2244G)

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

**SPEC CPU®2017 Integer Rate Result**

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base</th>
<th>37.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak</td>
<td>38.9</td>
</tr>
</tbody>
</table>

Copyright 2017-2020 Standard Performance Evaluation Corporation

---

**Base Optimization Flags (Continued)**

C++ benchmarks:
- -m64
  - -gnextgen
  - -Wl,-plugin-opt=-x86-branches-within-32B-boundaries
  - -Wl,-z,muldefs
    -xCORE-AVX2
  - -O3
  - -ffast-math
  - -flto
  - -mfpmath=sse
  - -funroll-loops
    - -fuse-ld=gold
    - -qopt-mem-layout-trans=4
  - -L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
    - -lqkmalloc

Fortran benchmarks:
- -m64
  - -Wl,-plugin-opt=-x86-branches-within-32B-boundaries
  - -Wl,-z,muldefs
  - -xCORE-AVX2
  - -O3
  - -ipo
  - -no-prec-div
  - -qopt-mem-layout-trans=4
  - -nostandard-realloc-lhs
  - -align array32byte
  - -auto
  - -mbranches-within-32B-boundaries
  - -L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
    - -lqkmalloc

---

**Peak Compiler Invocation**

C benchmarks:
- icc

C++ benchmarks:
- icpc

Fortran benchmarks:
- ifort

---

**Peak Portability Flags**

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -D_FILE_OFFSET_BITS=64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64
Lenovo Global Technology
ThinkSystem ST250
(3.80 GHz, Intel Xeon E-2244G)

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

Copyright 2017-2020 Standard Performance Evaluation Corporation

**SPEC CPU®2017 Integer Rate Result**

**Lenovo Global Technology**
ThinkSystem ST250
(3.80 GHz, Intel Xeon E-2244G)

**SPECrate®2017_int_base = 37.5**
**SPECrate®2017_int_peak = 38.9**

**Peak Optimization Flags**

C benchmarks:

500.perlbench_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2)
-xCORE-AVX2 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -fno-strict-overflow
-mbranches-within-32B-boundaries
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc

502.gcc_r: -m32
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/ia32_lin
-std=gnu89
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2 -flto
-Ofast(pass 1) -O3 -ffast-math -qnextgen -fuse-ld=gold
-qopt-mem-layout-trans=4 -L/usr/local/jemalloc32-5.0.1/lib
-ljemalloc

505.mcf_r: basepeak = yes

525.x264_r: -m64 -qnextgen -std=c11
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -xCORE-AVX2 -flto -O3 -ffast-math
-fuse-ld=gold -qopt-mem-layout-trans=4 -fno-alias
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc

557.xz_r: -Wl,-z,muldefs -xCORE-AVX2 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -mbranches-within-32B-boundaries
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc

C++ benchmarks:

520.omnetpp_r: basepeak = yes

523.xalancbmk_r: basepeak = yes

531.deepsjeng_r: basepeak = yes

541.leela_r: basepeak = yes

Fortran benchmarks:

(Continued on next page)
Lenovo Global Technology
ThinkSystem ST250
(3.80 GHz, Intel Xeon E-2244G)

SPECrate®2017_int_base = 37.5
SPECrate®2017_int_peak = 38.9

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

Test Date: Jun-2020
Hardware Availability: Mar-2020
Software Availability: Apr-2020

Peak Optimization Flags (Continued)

548.exchange2_r: basepeak = yes

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-SKL-J.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic19.1u1-official-linux64_revA.xml
http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-SKL-J.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.

Tested with SPEC CPU®2017 v1.1.0 on 2020-06-26 07:43:21-0400.
Originally published on 2020-07-21.