## Lenovo Global Technology

ThinkSystem SR550  
(2.60 GHz, Intel Xeon Silver 4112)  

<table>
<thead>
<tr>
<th>Test Sponsor</th>
<th>Lenovo Global Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested by</td>
<td>Lenovo Global Technology</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>OS</th>
<th>SUSE Linux Enterprise Server 12 SP2 (x86_64)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compiler</td>
<td>C/C++: Version 18.0.0.128 of Intel C/C++</td>
</tr>
<tr>
<td>Compiler for Linux</td>
<td></td>
</tr>
<tr>
<td>Fortran</td>
<td>Version 18.0.0.128 of Intel Fortran</td>
</tr>
<tr>
<td>Compiler for Linux</td>
<td></td>
</tr>
<tr>
<td>Firmware</td>
<td>Lenovo BIOS Version TEE119J 1.20 released Sep-2017</td>
</tr>
<tr>
<td>File System</td>
<td>btrfs</td>
</tr>
<tr>
<td>System State</td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers</td>
<td>64-bit</td>
</tr>
<tr>
<td>Peak Pointers</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Other</td>
<td>jemalloc: jemalloc memory allocator library V5.0.1; jemalloc: configured and built at default for 32bit (i686) and 64bit (x86_64) targets; jemalloc: built with the RedHat Enterprise 7.4, and the system compiler gcc 4.8.5; jemalloc: sources avilable from jemalloc.net or releases</td>
</tr>
</tbody>
</table>

### Hardware

<table>
<thead>
<tr>
<th>CPU Name</th>
<th>Intel Xeon Silver 4112</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max MHz</td>
<td>3000</td>
</tr>
<tr>
<td>Nominal</td>
<td>2600</td>
</tr>
<tr>
<td>Enabled</td>
<td>8 cores, 2 chips, 2 threads/core</td>
</tr>
<tr>
<td>Orderable</td>
<td>1,2 chips</td>
</tr>
<tr>
<td>Cache L1</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>L2</td>
<td>1 MB I+D on chip per core</td>
</tr>
<tr>
<td>L3</td>
<td>8.25 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other</td>
<td>None</td>
</tr>
<tr>
<td>Memory</td>
<td>384 GB (12 x 32 GB 2Rx4 PC4-2666V-R, running at 2400)</td>
</tr>
<tr>
<td>Storage</td>
<td>1 x 800 GB SAS SSD</td>
</tr>
<tr>
<td>Other</td>
<td>None</td>
</tr>
</tbody>
</table>

| Copies | 0 | 4.00 | 8.00 | 12.0 | 16.0 | 20.0 | 24.0 | 28.0 | 32.0 | 36.0 | 40.0 | 44.0 | 48.0 | 52.0 | 56.0 | 60.0 | 64.0 | 68.0 | 72.0 | 76.0 | 80.0 | 84.0 | 88.0 | 92.0 | 96.0 | 100.0 |
| 500.perlbench_r | 16 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 | 32.3 |
| 502.gcc_r | 16 | 40.0 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 |
| 520.omnetpp_r | 16 | 48.1 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 | 53.8 |
| 523.xalancbmk_r | 16 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 |
| 525.x264_r | 16 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 |
| 531.deepsjeng_r | 16 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 | 82.1 |
| 541.leela_r | 16 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 |
| 548.exchange2_r | 16 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 | 88.7 |
| 557.xz_r | 16 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 |

**SPECrate2017_int_base = 43.6**  
**SPECrate2017_int_peak = 46.2**
# SPEC CPU2017 Integer Rate Result

**Lenovo Global Technology**

ThinkSystem SR550  
(2.60 GHz, Intel Xeon Silver 4112)

<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>
</tbody>
</table>

**Tested by:** Lenovo Global Technology  
**Test Sponsor:** Lenovo Global Technology  
**Hardware Availability:** Aug-2017  
**Software Availability:** Sep-2017

## 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>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>16</td>
<td>803</td>
<td>31.7</td>
<td>789</td>
<td>32.3</td>
<td>787</td>
<td>32.4</td>
<td></td>
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</tr>
<tr>
<td>502.gcc_r</td>
<td>16</td>
<td>594</td>
<td>38.2</td>
<td>587</td>
<td>38.6</td>
<td>589</td>
<td>38.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>16</td>
<td>483</td>
<td>53.5</td>
<td>480</td>
<td>53.8</td>
<td>472</td>
<td>54.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>16</td>
<td>792</td>
<td>26.5</td>
<td>791</td>
<td>26.5</td>
<td>781</td>
<td>26.9</td>
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<td></td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>16</td>
<td>357</td>
<td>47.3</td>
<td>351</td>
<td>48.1</td>
<td>348</td>
<td>48.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>525.x264_r</td>
<td>16</td>
<td>329</td>
<td>85.2</td>
<td>326</td>
<td>85.9</td>
<td>323</td>
<td>86.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>16</td>
<td>493</td>
<td>37.2</td>
<td>491</td>
<td>37.4</td>
<td>490</td>
<td>37.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>541.leela_r</td>
<td>16</td>
<td>762</td>
<td>34.8</td>
<td>760</td>
<td>34.9</td>
<td>760</td>
<td>34.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>16</td>
<td>513</td>
<td>81.6</td>
<td>511</td>
<td>82.1</td>
<td>508</td>
<td>82.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>557.xz_r</td>
<td>16</td>
<td>551</td>
<td>31.4</td>
<td>551</td>
<td>31.4</td>
<td>551</td>
<td>31.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SPECrate2017_int_base = 43.6**  
**SPECrate2017_int_peak = 46.2**

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/cpu2017.1.0.2.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"
```

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>
Lenovo Global Technology
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CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
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SPECrate2017_int_base = 43.6
SPECrate2017_int_peak = 46.2

Test Date: Oct-2017
Hardware Availability: Aug-2017
Software Availability: Sep-2017

Platform Notes

BIOS configuration:
Choose Operating Mode set to Maximum Performance
DCU Streamer Prefetcher set to Enable
MONITORMWAIT set to Enable
SNC set to Enable
LLC dead line alloc set to Disable
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-g50d Mon Oct 30 03:02:47 2017

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 4112 CPU @ 2.60GHz
  2 "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 : 4
  siblings : 8
  physical 0: cores 1 2 3 4
  physical 1: cores 1 2 4 5

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
  Core(s) per socket: 4
  Socket(s): 2
  NUMA node(s): 2
  Vendor ID: GenuineIntel
  CPU family: 6
  Model: 85
  Model name: Intel(R) Xeon(R) Silver 4112 CPU @ 2.60GHz
  Stepping: 4
  CPU MHz: 2593.908
  BogoMIPS: 5187.81
  Virtualization: VT-x
  L1d cache: 32K
  L1i cache: 32K
  L2 cache: 1024K

(Continued on next page)
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SPECrate2017_int_base = 43.6
SPECrate2017_int_peak = 46.2

Platform Notes (Continued)

L3 cache: 8448K
NUMA node0 CPU(s): 0-3, 8-11
NUMA node1 CPU(s): 4-7, 12-15

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
aperfmperf eagerfpu pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg
fma cx16 xtrm pdcm pclid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes
xaave avx f16c rdrand lahf_lm abm 3dnowprefetch ida arat epb pln pts dtherm intel_pt
trp_shadow vmmi flexpriority ept vpid fgsgsbase tsc_adjust bmi1 hle avx2 smep bmi2
ersms invpcid rtm cqm mp xav512f avx512dq rdseed adx smap clflushopt clwb avx512cd
avx512bw avx512vl xsaveopt xsaves ve xgetbv1 cqm_llc cqm_occu llc

/proc/cpuinfo cache data
  cache size: 8448 KB

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a physical chip.
  available: 2 nodes (0-1)
  node 0 cpus: 0 1 2 3 8 9 10 11
  node 0 size: 193111 MB
  node 0 free: 192409 MB
  node 1 cpus: 4 5 6 7 12 13 14 15
  node 1 size: 193504 MB
  node 1 free: 192818 MB
  node distances:
    node 0 1
    0: 10 21
    1: 21 10

From /proc/meminfo
  MemTotal: 395894288 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"

(Continued on next page)
## Lenovo Global Technology

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<tr>
<th>SPECrate2017_int_base</th>
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<tbody>
<tr>
<td>SPECrate2017_int_peak</td>
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<table>
<thead>
<tr>
<th>Test Date</th>
<th>Oct-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware Availability</td>
<td>Aug-2017</td>
</tr>
<tr>
<td>Software Availability</td>
<td>Sep-2017</td>
</tr>
</tbody>
</table>

### Platform Notes (Continued)

```
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp2"
```

```
uname -a:
Linux linux-g50d 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016 (9464f67)
x86_64 x86_64 x86_64 GNU/Linux
```

```
rpm -qa
```

```
run-level 3 Oct 30 03:01
```

```
SPEC is set to: /home/cpu2017.1.0.2.ic18.0
```

```
Filesystem     Type   Size  Used Avail Use% Mounted on
/dev/sda2      btrfs  744G  121G  623G  17% /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 -[TIEE119J-1.20]- 09/06/2017
Memory:
  12x Hynix HMA84GR7AFR4N-VK 32 GB 2 rank 2666, configured at 2400
```

End of data from sysinfo program

### Compiler Version Notes

```
---
CC   500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
    525.x264_r(base, peak) 557.xz_r(base, peak)
---
```

```
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
---
```

```
---
CC   500.perlbench_r(peak) 502.gcc_r(peak)
---
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
---
```

```
---
CXXC 520.omnetpp_r(base) 523.xalancbmk_r(base) 531.deepsjeng_r(base)
    541.leela_r(base)
---
```

```
icpc (ICC) 18.0.0 20170811
```

(Continued on next page)
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SPECraten2017_int_base = 43.6
SPECraten2017_int_peak = 46.2

Test Date: Oct-2017
Hardware Availability: Aug-2017
Software Availability: Sep-2017

---

Compiler Version Notes (Continued)

Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

-----------------------------------------------

CXXC 520.omnetpp_r(peak) 523.xalancbmk_r(peak) 531.deepsjeng_r(peak) 541.leela_r(peak)
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

-----------------------------------------------

FC 548.exchange2_r(base, peak)
ifort (IFORT) 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

Base Portability Flags

500.perlbmk_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -DSPEC_LP64
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
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Base Optimization Flags

C benchmarks:
- Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
- qopt-mem-layout-trans=3 -L/usr/local/je5.0.1-64/lib -ljemalloc

C++ benchmarks:
- Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
- qopt-mem-layout-trans=3 -L/usr/local/je5.0.1-64/lib -ljemalloc

Fortran benchmarks:
- Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
- qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte
- L/usr/local/je5.0.1-64/lib -ljemalloc

Base Other Flags

C benchmarks:
- m64 -std=c11

C++ benchmarks:
- m64

Fortran benchmarks:
- m64

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

(Continued on next page)
Peak Portability Flags (Continued)

- 505.mcf_r: -DSPEC_LP64
- 520.omnetpp_r: -DSPEC_LP64
- 523.xalancbmk_r: -D_FILE_OFFSET_BITS=64 -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

Peak Optimization Flags

C benchmarks:

- 500.perlbench_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo
  -xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=3
  -fno-strict-overflow -L/usr/local/je5.0.1-64/lib
  -ljemalloc

- 502.gcc_r: -L/opt/intel/compilers_and_libraries_2018/linux/lib/ia32
  -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo
  -xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=3
  -L/usr/local/je5.0.1-32/lib -ljemalloc

- 505.mcf_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
  -qopt-mem-layout-trans=3 -L/usr/local/je5.0.1-64/lib
  -ljemalloc

- 525.x264_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
  -qopt-mem-layout-trans=3 -fno-alias
  -L/usr/local/je5.0.1-64/lib -ljemalloc

- 557.xz_r: Same as 505.mcf_r

C++ benchmarks:

- 520.omnetpp_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo
  -xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=3
  -L/usr/local/je5.0.1-64/lib -ljemalloc

- 523.xalancbmk_r: -L/opt/intel/compilers_and_libraries_2018/linux/lib/ia32
  -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo
  -xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=3
  -L/usr/local/je5.0.1-32/lib -ljemalloc

(Continued on next page)
Lenovo Global Technology
ThinkSystem SR550
(2.60 GHz, Intel Xeon Silver 4112)

SPECrace2017_int_base = 43.6
SPECrace2017_int_peak = 46.2

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

Peak Optimization Flags (Continued)

531.deepsjeng_r: Same as 520.omnetpp_r

541.leela_r: Same as 520.omnetpp_r

Fortran benchmarks:
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte
-L/usr/local/je5.0.1-64/lib -ljemalloc

Peak Other Flags

C benchmarks (except as noted below):
-m64 -std=c11

502.gcc_r: -m32 -std=c11

C++ benchmarks (except as noted below):
-m64

523.xalancbmk_r: -m32

Fortran benchmarks:
-m64

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

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

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

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