**Lenovo Global Technology**

ThinkSystem SR530  
(2.20 GHz, Intel Xeon Silver 4114T)

**SPECrate2017_int_base = 94.6**  
**SPECrate2017_int_peak = 98.6**

**CPU2017 License:** 9017  
**Test Date:** Jan-2018  
**Hardware Availability:** Aug-2017

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

---

### Hardware

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>SPECrate2017_int_base (94.6)</th>
<th>SPECrate2017_int_peak (98.6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>40</td>
<td>20.6</td>
<td>87.7</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>40</td>
<td>83.8</td>
<td>98.5</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>40</td>
<td>60.5</td>
<td>57.7</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>40</td>
<td></td>
<td>57.7</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>40</td>
<td></td>
<td>98.0</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>40</td>
<td></td>
<td>119</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>40</td>
<td></td>
<td>79.5</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>40</td>
<td></td>
<td>75.5</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>40</td>
<td></td>
<td>182</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>40</td>
<td></td>
<td>190</td>
</tr>
<tr>
<td>500 forging</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>502 gcc comp</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>505 mcf comp</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>520 omnetpp comp</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>523 xalancbmk comp</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>525 x264 comp</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>531 deepsjeng comp</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>541 leela comp</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>548 exchange2 comp</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>557 xz comp</td>
<td>40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CPU Name:** Intel Xeon Silver 4114T  
**Max MHz.:** 3000  
**Nominal:** 2200  
**Enabled:** 20 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:** 13.75 MB I+D on chip per core  
**Other:** None  
**Memory:** 384 GB (12 x 32 GB 2Rx4 PC4-2666V-R, running at 2400)  
**Storage:** 1 x 800 GB SAS SSD  
**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 TEE119Q 1.21 released Dec-2017  
**File System:** btrfs  
**System State:** Run level 3 (multi-user)  
**Base Pointers:** 64-bit  
**Peak Pointers:** 32/64-bit  
**Other:** jemalloc: jemalloc memory allocator library V5.0.1
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>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>40</td>
<td>896</td>
<td>71.1</td>
<td>901</td>
<td>70.6</td>
<td>906</td>
<td>70.3</td>
<td>40</td>
<td>723</td>
<td>88.0</td>
<td>726</td>
<td>87.7</td>
<td>730</td>
<td>87.2</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>40</td>
<td>676</td>
<td>83.8</td>
<td>673</td>
<td>84.1</td>
<td>678</td>
<td>83.6</td>
<td>40</td>
<td>572</td>
<td>99.0</td>
<td>576</td>
<td>98.4</td>
<td>575</td>
<td>98.5</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>40</td>
<td>534</td>
<td>121</td>
<td>550</td>
<td>118</td>
<td>545</td>
<td>119</td>
<td>40</td>
<td>565</td>
<td>115</td>
<td>572</td>
<td>113</td>
<td>558</td>
<td>116</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>40</td>
<td>868</td>
<td>60.5</td>
<td>867</td>
<td>60.5</td>
<td>863</td>
<td>60.8</td>
<td>40</td>
<td>857</td>
<td>61.2</td>
<td>917</td>
<td>57.2</td>
<td>909</td>
<td>57.7</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>40</td>
<td>431</td>
<td>98.0</td>
<td>432</td>
<td>97.7</td>
<td>431</td>
<td>98.0</td>
<td>40</td>
<td>360</td>
<td>117</td>
<td>361</td>
<td>117</td>
<td>360</td>
<td>117</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>40</td>
<td>386</td>
<td>182</td>
<td>393</td>
<td>179</td>
<td>383</td>
<td>98.0</td>
<td>40</td>
<td>374</td>
<td>188</td>
<td>368</td>
<td>190</td>
<td>367</td>
<td>191</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>40</td>
<td>564</td>
<td>81.3</td>
<td>563</td>
<td>81.5</td>
<td>564</td>
<td>81.3</td>
<td>40</td>
<td>577</td>
<td>79.4</td>
<td>581</td>
<td>78.9</td>
<td>578</td>
<td>79.3</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>40</td>
<td>881</td>
<td>75.2</td>
<td>883</td>
<td>75.0</td>
<td>893</td>
<td>74.2</td>
<td>40</td>
<td>878</td>
<td>75.5</td>
<td>875</td>
<td>75.7</td>
<td>879</td>
<td>75.4</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>40</td>
<td>594</td>
<td>176</td>
<td>594</td>
<td>177</td>
<td>594</td>
<td>176</td>
<td>40</td>
<td>594</td>
<td>177</td>
<td>595</td>
<td>176</td>
<td>594</td>
<td>176</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>40</td>
<td>615</td>
<td>70.2</td>
<td>615</td>
<td>70.2</td>
<td>616</td>
<td>70.1</td>
<td>40</td>
<td>670</td>
<td>64.5</td>
<td>670</td>
<td>64.5</td>
<td>669</td>
<td>64.6</td>
</tr>
</tbody>
</table>

SPECrate2017_int_base = 94.6
SPECrate2017_int_peak = 98.6

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>
jemalloc: configured and built at default for 32bit (i6486) and 64bit (x86_64) targets;
jemalloc: built with the RedHat Enterprise 7.4, and the system compiler gcc 4.8.5;
jemalloc: sources available from jemalloc.net or

(Continued on next page)
Lenovo Global Technology
ThinkSystem SR530
(2.20 GHz, Intel Xeon Silver 4114T)

SPECrate2017_int_base = 94.6
SPECrate2017_int_peak = 98.6

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

Test Date: Jan-2018
Hardware Availability: Aug-2017
Software Availability: Sep-2017

General Notes (Continued)
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
DCU Streamer Prefetcher set to Enable
MONITORM/WAIT set to Enable
SNC set to Enable
XPT Prefetcher set to Enable
Stale AtoS set to Enable
Sysinfo program /home/cpu2017.1.0.2.ic18.0/bin/sysinfo
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618b091c0f
running on linux-ickx Tue Jan 9 08:52:32 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

From /proc/cpuinfo
model name : Intel(R) Xeon(R) Silver 4114T CPU @ 2.20GHz
   2 "physical id"'s (chips)
   40 "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 : 10
siblings : 20
physical 0: cores 0 1 2 3 4 8 9 10 11 12
physical 1: cores 0 1 2 3 4 8 9 10 11 12

(Continued on next page)
Lenovo Global Technology
ThinkSystem SR530
(2.20 GHz, Intel Xeon Silver 4114T)

SPECrate2017_int_base = 94.6
SPECrate2017_int_peak = 98.6

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

Test Date: Jan-2018
Hardware Availability: Aug-2017
Software Availability: Sep-2017

Platform Notes (Continued)

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 40
On-line CPU(s) list: 0-39
Thread(s) per core: 2
Core(s) per socket: 10
Socket(s): 2
NUMA node(s): 2
Vendor ID: GenuineIntel
CPU family: 6
Model: 85
Model name: Intel(R) Xeon(R) Silver 4114T CPU @ 2.20GHz
Stepping: 4
CPU MHz: 2194.834
BogoMIPS: 4389.66
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 14080K
NUMA node0 CPU(s): 0-9,20-29
NUMA node1 CPU(s): 10-19,30-39
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 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 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 pni pclmulqdq dtes64
monitor aes fmsrtm pdcm pclmulqdq dqfd xidtarch tpr_shadow vnmi flexpriority ept
vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx avx512f
avx512dq rdseed adx smap clflushopt clwb avx512cd avx512bw avx512vl xsaveopt
xsaves xgetbv1 cqm_llc cqm_occupa llc

/proc/cpuinfo cache data
cache size : 14080 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 4 5 6 7 8 9 20 21 22 23 24 25 26 27 28 29
node 0 size: 193100 MB
node 0 free: 192275 MB
node 1 cpus: 10 11 12 13 14 15 16 17 18 19 30 31 32 33 34 35 36 37 38 39
node 1 size: 193504 MB
node 1 free: 192829 MB
node distances:

(Continued on next page)
**SPEC CPU2017 Integer Rate Result**

**Lenovo Global Technology**

ThinkSystem SR530  
(2.20 GHz, Intel Xeon Silver 4114T)  

<table>
<thead>
<tr>
<th>CPU2017 License: 9017</th>
<th>SPECrate2017_int_base = 94.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor: Lenovo Global Technology</td>
<td>SPECrate2017_int_peak = 98.6</td>
</tr>
<tr>
<td>Tested by: Lenovo Global Technology</td>
<td>Test Date: Jan-2018</td>
</tr>
<tr>
<td>Hardware Availability: Aug-2017</td>
<td></td>
</tr>
<tr>
<td>Software Availability: Sep-2017</td>
<td></td>
</tr>
</tbody>
</table>

---

**Platform Notes (Continued)**

node    0   1  
0:  10  21  
1:  21  10  

From /proc/meminfo  
MemTotal:       395883556 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-ickx 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 08:51  

SPEC is set to: /home/cpu2017.1.0.2.ic18.0  
Filesystem Type Size Used Avail Use% Mounted on  
/dev/sda2 btrfs 744G 235G 509G 32% /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 -[TEE119Q-1.21]- 12/12/2017  
Memory:  
  12x Hynix HMA84GR7AFR4N-VK 32 GB 2 rank 2666, configured at 2400  

(End of data from sysinfo program)
Lenovo Global Technology

ThinkSystem SR530
(2.20 GHz, Intel Xeon Silver 4114T)

<table>
<thead>
<tr>
<th>CPU2017 License: 9017</th>
<th>Test Date: Jan-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor: Lenovo Global Technology</td>
<td>Hardware Availability: Aug-2017</td>
</tr>
<tr>
<td>Tested by: Lenovo Global Technology</td>
<td>Software Availability: Sep-2017</td>
</tr>
</tbody>
</table>

**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
 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

(Continued on next page)
### Lenovo Global Technology

#### ThinkSystem SR530 (2.20 GHz, Intel Xeon Silver 4114T)

<table>
<thead>
<tr>
<th>CPU2017 License</th>
<th>Lenovo Global Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate2017_int_base</td>
<td>Lenovo Global Technology</td>
</tr>
<tr>
<td>Test Date</td>
<td>Jan-2018</td>
</tr>
<tr>
<td>Hardware Availability</td>
<td>Aug-2017</td>
</tr>
<tr>
<td>Software Availability</td>
<td>Sep-2017</td>
</tr>
<tr>
<td>Tested by</td>
<td>Lenovo Global Technology</td>
</tr>
<tr>
<td>Software Availability</td>
<td>Sep-2017</td>
</tr>
</tbody>
</table>

---

### Base Compiler Invocation (Continued)

**Fortran benchmarks:**

```
ifort
```

### Base Portability Flags

```
500.perlbench_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
```

### Base Optimization Flags

C benchmarks:

```
-W1,-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:

```
-W1,-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:

```
-W1,-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
```

---

(Continued on next page)
## Lenovo Global Technology

**ThinkSystem SR530**  
(2.20 GHz, Intel Xeon Silver 4114T)

<table>
<thead>
<tr>
<th>SPECrate2017_int_base</th>
<th>SPECrate2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>94.6</td>
<td>98.6</td>
</tr>
</tbody>
</table>

| CPU2017 License:     | 9017                  |
| Test Sponsor:        | Lenovo Global Technology |
| Tested by:           | Lenovo Global Technology |
| Test Date:           | Jan-2018               |
| Hardware Availability: | Aug-2017       |
| Software Availability: | Sep-2017             |

### Base Other Flags (Continued)

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`
- 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
  ```
- **C++ benchmarks:**  
  ```
  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
  ```

(Continued on next page)
Lenovo Global Technology
ThinkSystem SR530  
(2.20 GHz, Intel Xeon Silver 4114T)

**SPECrate2017_int_base** = 94.6  
**SPECrate2017_int_peak** = 98.6

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>9017</th>
<th>Test Date:</th>
<th>Jan-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>Lenovo Global Technology</td>
<td>Hardware Availability:</td>
<td>Aug-2017</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Lenovo Global Technology</td>
<td>Software Availability:</td>
<td>Sep-2017</td>
</tr>
</tbody>
</table>

**Peak Optimization Flags (Continued)**

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

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

(Continued on next page)
Lenovo Global Technology
ThinkSystem SR530
(2.20 GHz, Intel Xeon Silver 4114T)

SPECrate2017_int_base = 94.6
SPECrate2017_int_peak = 98.6

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

Test Date: Jan-2018
Hardware Availability: Aug-2017
Software Availability: Sep-2017

Peak Other Flags (Continued)

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

SPEC is a registered trademark 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 CPU2017 v1.0.2 on 2018-01-08 19:52:31-0500.
Originally published on 2018-03-06.