Lenovo Global Technology
ThinkSystem SR950

**SPECCompG_peak2012 = Not Run**

**SPECCompG_base2012 = 32.9**

<table>
<thead>
<tr>
<th>Benchmark</th>
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<tbody>
<tr>
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<td>32.9</td>
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</tbody>
</table>

**OMPG2012 Result**

| License: | 28 |
| Test sponsor: | Lenovo Global Technology |
| Tested by: | Lenovo Global Technology |
| Test date: | Aug-2018 |
| Hardware Availability: | Aug-2017 |
| Software Availability: | Aug-2018 |

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>168</td>
<td>28.7</td>
<td>26.5</td>
<td>38.7</td>
<td>27.6</td>
<td>17.0</td>
<td>19.5</td>
<td>22.3</td>
<td>22.0</td>
<td>36.8</td>
<td>19.8</td>
<td>61.6</td>
<td>61.5</td>
<td>26.6</td>
<td></td>
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**Hardware**

- **CPU Name:** Intel Xeon Platinum 8180
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.80 GHz
- **CPU MHz:** 2500
- **CPU MHz Maximum:** 3800
- **FPU:** Integrated
- **CPU(s) enabled:** 84 cores, 3 chips, 28 cores/chip, 2 threads/core
- **CPU(s) orderable:** 2,3,4,6,8 Chips
- **Primary Cache:** 32 KB I + 32 KB D on chip per core
- **Secondary Cache:** 1 MB I+D on chip per core
- **L3 Cache:** 39424 KB I+D on chip per chip
- **Memory:** 576 GB (36 x 16 GB 2Rx8 PC4-2666V)
- **Disk Subsystem:** 0.96TB NVMe SSD
- **Base Threads Run:** 168
- **Minimum Peak Threads:**

**Software**

- **Operating System:** Red Hat Enterprise Linux Server release 7.5, Kernel 3.10.0-862.3.2.el7.x86_64
- **Compiler:** C/C++/Fortran: Version 18.0.3.222 of Intel Composer XE for Linux Build 20180516
- **Auto Parallel:** No
- **File System:** ext3
- **System State:** Default
- **Base Pointers:** 64-bit
- **Peak Pointers:** Not Applicable
- **Other Software:** None

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Maximum Peak Threads: --

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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<td>170</td>
<td>26.5</td>
</tr>
</tbody>
</table>

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

### Operating System Notes

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.
ulimit -s unlimited

### Platform Notes

Sysinfo program /home/omp2012/Docs/sysinfo
$Rev: 395 $ $Date:: 2012-07-25 #$ 8f8c0fe9e19c658963a1e67685e50647
running on localhost.localdomain Thu Aug 23 14:02:58 2018

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:
http://www.spec.org/omp2012/Docs/config.html#sysinfo

From /proc/cpuinfo
model name : Intel(R) Xeon(R) Platinum 8180 CPU @ 2.50GHz
  3 "physical id"s (chips)
  168 "processors"

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Platform Notes (Continued)
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 : 28
siblings : 56
physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
25 26 27 28 29 30
physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
25 26 27 28 29 30
physical 3: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
25 26 27 28 29 30
cache size : 39424 KB

From /proc/meminfo
MemTotal: 593801136 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release*/etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.5 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VARIANT="Server"
VARIANT_ID="server"
VERSION_ID="7.5"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.5 (Maipo)"
redhat-release: Red Hat Enterprise Linux Server release 7.5 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.5 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.5:ga:server

uname -a:
Linux localhost.localdomain 3.10.0-862.3.2.el7.x86_64 #1 SMP Tue May 15
18:22:15 EDT 2018 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Aug 21 10:44

SPEC is set to: /home/omp2012
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs 839G 17G 822G 2% /home

Additional information from dmidecode:
BIOS Lenovo -[PSE113P-1.30]- 06/14/2018
Memory:
60x NO DIMM NO DIMM
36x Samsung M393A2K43BB1-CTD 16 GB 2666 MHz 2 rank
(End of data from sysinfo program)
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General Notes

General base OMP Library Settings
   ENV_KMP_AFFINITY=compact,1

General OMP Library Settings
   KMP_LIBRARY=turnaround
   KMP_STACKSIZE=16G
   KMP_BLOCKTIME=infinite
   OMP_DYNAMIC=FALSE
   OMP_NESTED=FALSE
   OMP_SCHEDULE=static

BIOS setting notes:
Operating Mode set to Maximum Performance Mode

Base Compiler Invocation

C benchmarks:
   icc

C++ benchmarks:
   icpc

Fortran benchmarks:
   ifort

Base Portability Flags

   350.md: -FR
   357.utf331: -mcmodel=medium
   363.swim: -mcmodel=medium
   367.imagick: -std=c99

Base Optimization Flags

C benchmarks:
   -O2 -qopenmp -ipo -xHOST -ansi-alias

C++ benchmarks:
   -O2 -qopenmp -ipo -xHOST -ansi-alias

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### Base Optimization Flags (Continued)

- O2 -qopenmp -ipo -xHOST -align array64byte

The flags files that were used to format this result can be browsed at:
- [http://www.spec.org/omp2012/flags/Lenovo-Platform-Flags-V1.2-SKL-C.html](http://www.spec.org/omp2012/flags/Lenovo-Platform-Flags-V1.2-SKL-C.html)

You can also download the XML flags sources by saving the following links:
- [http://www.spec.org/omp2012/flags/Lenovo-Platform-Flags-V1.2-SKL-C.xml](http://www.spec.org/omp2012/flags/Lenovo-Platform-Flags-V1.2-SKL-C.xml)