**Lenovo Global Technology**  
**Intel Xeon Platinum 6142 CPU**  
**ThinkSystem SR670**

**SPECaccel_omp_peak** = Not Run

**SPECaccel_omp_base** = 5.16

<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>

**ACCEL license:** 16  
**Test date:** Feb-2019

**Hardware**

- **CPU Name:** Intel Xeon Platinum 6142 CPU, 2.6 GHz
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.70 GHz
- **CPU MHz:** 2600
- **CPU MHz Maximum:** 3700
- **FPU:** Integrated
- **CPU(s) enabled:** 32 cores, 2 chips, 16 cores/chip
- **CPU(s) orderable:** 1,2 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:** 23040 KB I+D on chip per chip
- **Other Cache:** None

**Accelerator**

- **Accel Model Name:** Intel Xeon Platinum 6142 CPU
- **Accel Vendor:** Intel
- **Accel Name:** Intel Xeon Platinum 6142 CPU
- **Type of Accel:** CPU
- **Accel Connection:** 10.4 GT/s UPI
- **Does Accel Use ECC:** yes
- **Accel Description:** 2 x Intel Xeon Platinum 6142 CPU
- **Accel Driver:** None

![Graph showing SPECaccel_omp_base = 5.16](image-url)
Lenovo Global Technology
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**ACCEL license:** 16
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**Test date:** Feb-2019
**Hardware Availability:** Feb-2019
**Software Availability:** Feb-2019

**Hardware (Continued)**
- **Memory:** 768 GB (24 x 32 GB 2Rx4 PC4-2666V)
- **Disk Subsystem:** Micron 480 GB 6 Gbps SATA 2.5" SSD (4XB7A10153)
- **Other Hardware:** None

**Software**
- **Operating System:** Red Hat Enterprise Linux Server release 7.5, kernel 3.10.0.862.el7.x86_64
- **Compiler:** Intel C/C++/Fortran 18.0 Update 5 for Linux Version 18.0.5 Build 20180823
- **File System:** xfs
- **System State:** Default
- **Other Software:** FFTW 3.3.8

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base Seconds</th>
<th>Ratio</th>
<th>Base Seconds</th>
<th>Ratio</th>
<th>Base Seconds</th>
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Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

### Submit Notes

The config file option 'submit' was used.
Lenovo Global Technology
Intel Xeon Platinum 6142 CPU
ThinkSystem SR670

**Platform Notes**

Sysinfo program /home/ACCEL1.2/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3fe1df68447e8a35
running on bannerrh75 Tue Feb 26 04:24:56 2019

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/accel/Docs/config.html#sysinfo

From /proc/cpuinfo
model name : Intel(R) Xeon(R) Gold 6142 CPU @ 2.60GHz
  2 "physical id"s (chips)
  64 "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 : 16
siblings : 32
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
cache size : 22528 KB

From /proc/meminfo
MemTotal:       792040060 kB
HugePages_Total:       0
Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
  Red Hat Enterprise Linux Server release 7.5 (Maipo)

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 bannerrh75 3.10.0-862.e17.x86_64 #1 SMP Wed Mar 21 18:14:51 EDT 2018
  x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Feb 26 02:44

Continued on next page
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SPECaccel_omp_peak = Not Run
SPECaccel_omp_base = 5.16

ACCEL license: 16
Test sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Platform Notes (Continued)

SPEC is set to: /home/ACCEL1.2
Filesystem Type Size  Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs 192G 67G 126G 35% /home

Additional information from dmidecode:

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 -[G1E105G-1.10]- 12/07/2018
Memory:
24x Micron 36ASF4G72PZ-2G6D1 32 GB 2 rank 2666 MHz

(End of data from sysinfo program)

General 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.

Base Compiler Invocation

C benchmarks:
  icc

Fortran benchmarks:
  ifort

Benchmarks using both Fortran and C:
  icc ifort

Base Portability Flags

503.postencil: -DSPEC_USE_INNER_SIMD
504.polbm: -DSPEC_USE_INNER_SIMD
514.pomriq: -DSPEC_USE_INNER_SIMD
550.pmd: -DSPEC_USE_INNER_SIMD -80
551.ppalm: -DSPEC_USE_INNER_SIMD

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<td>Feb-2019</td>
</tr>
<tr>
<td>Software</td>
<td>Feb-2019</td>
</tr>
</tbody>
</table>

**Base Portability Flags (Continued)**

- 552 pep: -DSPEC_USE_INNER_SIMD
- 553 pclvleaf: -DSPEC_USE_INNER_SIMD
- 554 pcc: -DSPEC_USE_INNER_SIMD
- 555 pseismic: -DSPEC_USE_INNER_SIMD
- 556 psp: -DSPEC_USE_INNER_SIMD
- 557 pcsp: -DSPEC_USE_INNER_SIMD
- 559 pmniGhost: -DSPEC_USE_INNER_SIMD -nofor-main
- 560 pilbdc: -DSPEC_USE_INNER_SIMD
- 563 psim: -DSPEC_USE_INNER_SIMD
- 570 pbt: -DSPEC_USE_INNER_SIMD

**Base Optimization Flags**

**C benchmarks:**

-03 -xCOMMON-AVX512 -qopenmp -qopenmp-offload=host

**Fortran benchmarks:**

-03 -xCOMMON-AVX512 -qopenmp -qopenmp-offload=host

**Benchmarks using both Fortran and C:**

-03 -xCOMMON-AVX512 -qopenmp -qopenmp-offload=host

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

https://www.spec.org/accel/flags/Lenovo-SPECACCEL1.2_Platform_Flags.20190321.html

https://www.spec.org/accel/flags/Intel-icc17.0-linux64.20190321.html

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

https://www.spec.org/accel/flags/Lenovo-SPECACCEL1.2_Platform_Flags.20190321.xml

https://www.spec.org/accel/flags/Intel-icc17.0-linux64.20190321.xml

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

Tested with SPEC ACCEL v1.2.
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