



SPEC ACCEL™ OMP Result

Copyright 2015-2019 Standard Performance Evaluation Corporation

Lenovo Global Technology
Intel Xeon Platinum 6142 CPU
ThinkSystem SR670

SPECaccel_omp_peak = Not Run

SPECaccel_omp_base = 5.16

ACCEL license: 16

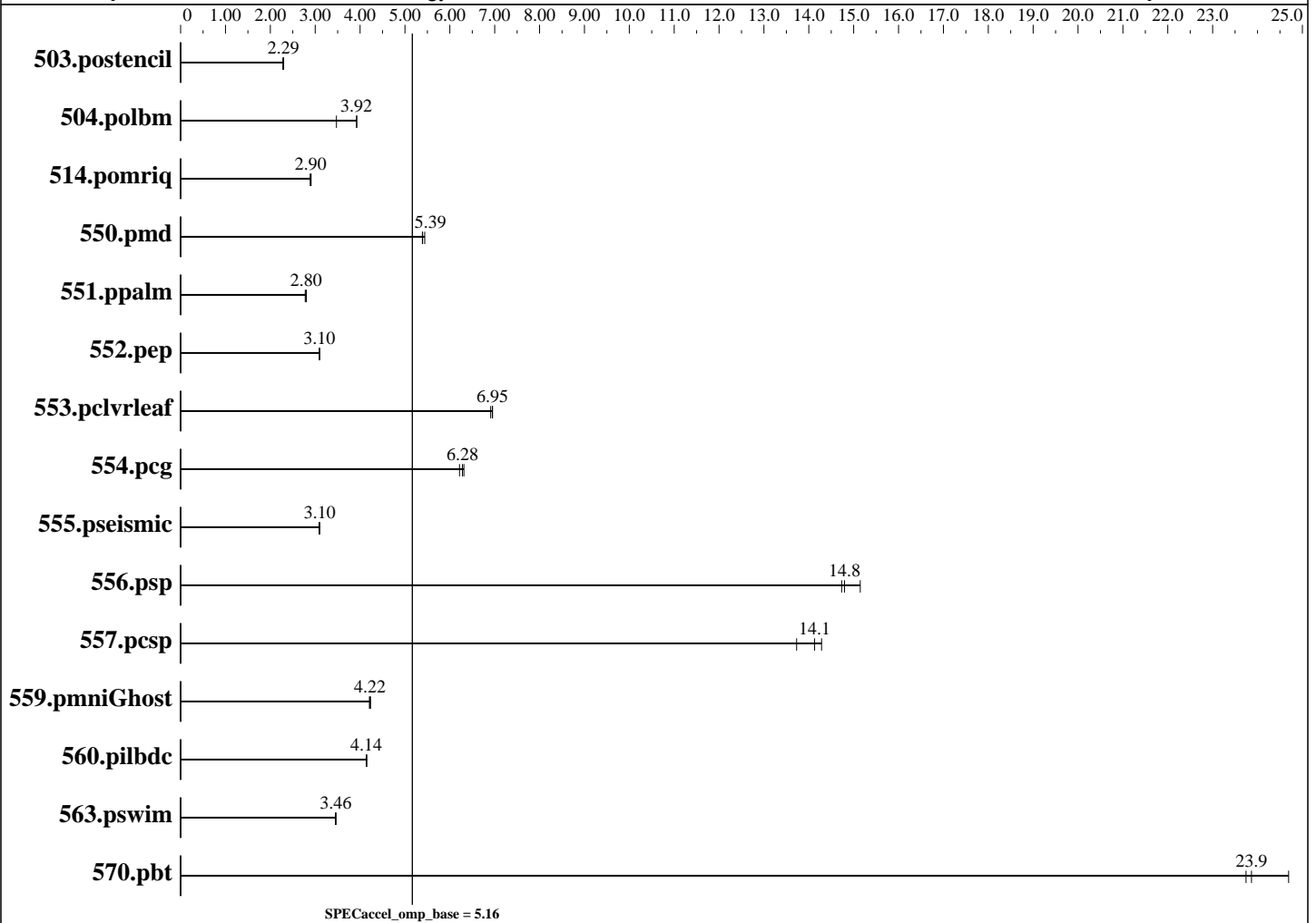
Test sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test date: Feb-2019

Hardware Availability: Feb-2019

Software Availability: 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

Continued on next page

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

Standard Performance Evaluation Corporation

info@spec.org
http://www.spec.org/



SPEC ACCEL OMP Result

Copyright 2015-2019 Standard Performance Evaluation Corporation

Lenovo Global Technology
Intel Xeon Platinum 6142 CPU
ThinkSystem SR670

SPECaccel_omp_peak = Not Run

SPECaccel_omp_base = 5.16

ACCEL license: 16	Test date: Feb-2019
Test sponsor: Lenovo Global Technology	Hardware Availability: Feb-2019
Tested by: Lenovo Global Technology	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

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.postencil	47.5	2.30	<u>47.6</u>	<u>2.29</u>	47.8	2.28						
504.polbm	31.1	3.93	35.1	3.47	<u>31.1</u>	<u>3.92</u>						
514.pomriq	215	2.89	<u>214</u>	<u>2.90</u>	214	2.91						
550.pmd	<u>44.7</u>	<u>5.39</u>	44.3	5.44	44.7	5.39						
551.ppalm	<u>194</u>	<u>2.80</u>	196	2.78	194	2.80						
552.pep	74.6	3.10	<u>74.6</u>	<u>3.10</u>	74.6	3.10						
553.pclvrleaf	166	6.91	165	6.95	<u>165</u>	<u>6.95</u>						
554.pcg	53.6	6.22	52.7	6.31	<u>53.0</u>	<u>6.28</u>						
555.pseismic	91.0	3.10	91.4	3.09	<u>91.0</u>	<u>3.10</u>						
556.psp	55.5	14.7	<u>55.3</u>	<u>14.8</u>	54.0	15.1						
557.pcsp	62.6	13.7	<u>60.8</u>	<u>14.1</u>	60.1	14.3						
559.pmniGhost	94.4	4.21	93.8	4.23	<u>94.1</u>	<u>4.22</u>						
560.pilbdc	<u>158</u>	<u>4.14</u>	158	4.14	157	4.15						
563.pswim	46.1	3.45	<u>46.0</u>	<u>3.46</u>	45.9	3.46						
570.pbt	32.9	23.7	<u>32.7</u>	<u>23.9</u>	31.6	24.7						

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.



SPEC ACCEL OMP Result

Copyright 2015-2019 Standard Performance Evaluation Corporation

Lenovo Global Technology
Intel Xeon Platinum 6142 CPU
ThinkSystem SR670

SPECaccel_omp_peak = Not Run

SPECaccel_omp_base = 5.16

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

Test date: Feb-2019
Hardware Availability: Feb-2019
Software Availability: Feb-2019

Platform Notes

```
Sysinfo program /home/ACCEL1.2/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3feldf68447e8a35
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.el7.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



SPEC ACCEL OMP Result

Copyright 2015-2019 Standard Performance Evaluation Corporation

Lenovo Global Technology
Intel Xeon Platinum 6142 CPU
ThinkSystem SR670

SPECaccel_omp_peak = Not Run

SPECaccel_omp_base = 5.16

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

Test date: Feb-2019
Hardware Availability: Feb-2019
Software Availability: Feb-2019

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

Continued on next page



SPEC ACCEL OMP Result

Copyright 2015-2019 Standard Performance Evaluation Corporation

Lenovo Global Technology
Intel Xeon Platinum 6142 CPU
ThinkSystem SR670

SPECaccel_omp_peak = Not Run

SPECaccel_omp_base = 5.16

ACCEL license: 16

Test sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test date: Feb-2019

Hardware Availability: Feb-2019

Software Availability: Feb-2019

Base Portability Flags (Continued)

```
552.pep: -DSPEC_USE_INNER_SIMD
553.pclvrleaf: -DSPEC_USE_INNER_SIMD
554.pcg: -DSPEC_USE_INNER_SIMD
555.pseismic: -DSPEC_USE_INNER_SIMD
556.psp: -DSPEC_USE_INNER_SIMD
557.pcp: -DSPEC_USE_INNER_SIMD
559.pmniGhost: -DSPEC_USE_INNER_SIMD -nofor-main
560.pilbdc: -DSPEC_USE_INNER_SIMD
563.pswim: -DSPEC_USE_INNER_SIMD
570.pbt: -DSPEC_USE_INNER_SIMD
```

Base Optimization Flags

C benchmarks:

```
-O3 -xCOMMON-AVX512 -qopenmp -qopenmp-offload=host
```

Fortran benchmarks:

```
-O3 -xCOMMON-AVX512 -qopenmp -qopenmp-offload=host
```

Benchmarks using both Fortran and C:

```
-O3 -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-iccl7.0-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-iccl7.0-linux64.20190321.xml>

SPEC ACCEL is a 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 webmaster@spec.org.

Tested with SPEC ACCEL v1.2.
Report generated on Thu Mar 21 11:47:57 2019 by SPEC ACCEL PS/PDF formatter v1290.
Originally published on 21 March 2019.