



SPEC® OMPG2012 Result

Copyright 2012-2019 Standard Performance Evaluation Corporation

Huawei

Huawei 2288H V5 (Intel Xeon Platinum 8280, 2.7 GHz)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 25.9

OMP2012 license:27

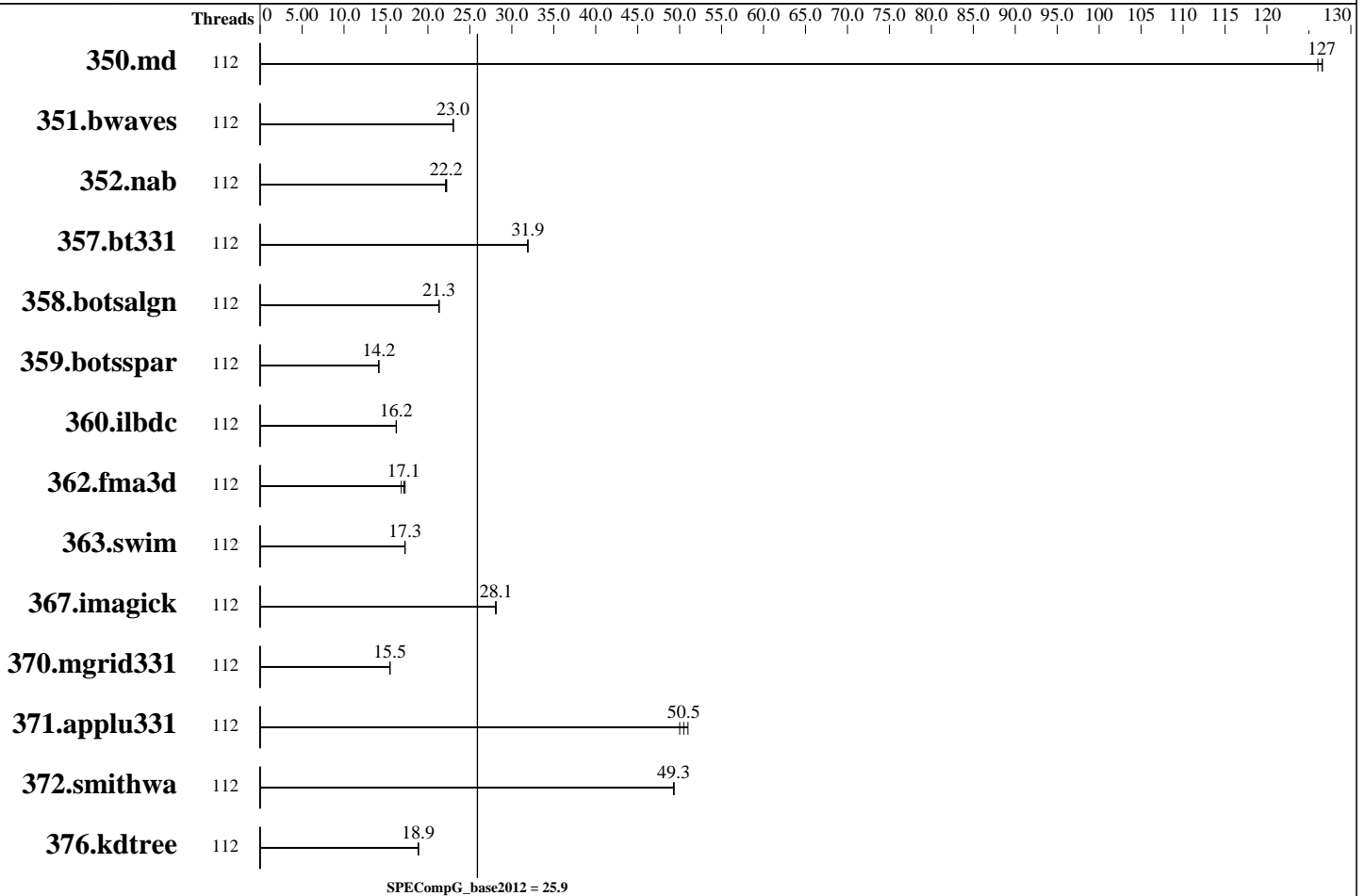
Test sponsor: Huawei

Tested by: Huawei

Test date: Mar-2019

Hardware Availability: Jul-2017

Software Availability: Mar-2019



Hardware

CPU Name: Intel Xeon Platinum 8280
 CPU Characteristics: Intel Turbo Boost Technology up to 4.00 GHz
 CPU MHz: 2700
 CPU MHz Maximum: 4000
 FPU: Integrated
 CPU(s) enabled: 56 cores, 2 chips, 28 cores/chip, 2 threads/core
 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: 38.5 MB I+D on chip per chip
 Other Cache: None
 Memory: 384 GB (24 x 16 GB 2Rx8 PC4-2933Y-R)
 Disk Subsystem: 1 X 480 GB SSD SAS
 Other Hardware: None
 Base Threads Run: 112
 Minimum Peak Threads: --

Continued on next page

Software

Operating System: SUSE Linux Enterprise Server 12 SP4 (x86_64) 4.12.14-94.41-default
 Compiler: C/C++/Fortran: Version 19.0.3.199 of Intel Composer for Linux Build 20190206
 Auto Parallel: No
 File System: xfs
 System State: Run Level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: Not Applicable
 Other Software: None



SPEC OMPG2012 Result

Copyright 2012-2019 Standard Performance Evaluation Corporation

Huawei

Huawei 2288H V5 (Intel Xeon Platinum 8280, 2.7 GHz)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 25.9

OMP2012 license:27

Test sponsor: Huawei

Tested by: Huawei

Test date: Mar-2019

Hardware Availability: Jul-2017

Software Availability: Mar-2019

Maximum Peak Threads: --

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
350.md	112	36.7	126	36.6	127	<u>36.6</u>	<u>127</u>							
351.bwaves	112	197	23.0	197	23.0	<u>197</u>	<u>23.0</u>							
352.nab	112	<u>175</u>	<u>22.2</u>	176	22.1	175	22.2							
357.bt331	112	148	31.9	<u>149</u>	<u>31.9</u>	149	31.9							
358.botsalgn	112	204	21.3	204	21.3	<u>204</u>	<u>21.3</u>							
359.botsspar	112	371	14.2	<u>371</u>	<u>14.2</u>	372	14.1							
360.ilbdc	112	219	16.2	219	16.2	<u>219</u>	<u>16.2</u>							
362.fma3d	112	<u>222</u>	<u>17.1</u>	226	16.8	220	17.3							
363.swim	112	<u>262</u>	<u>17.3</u>	262	17.3	263	17.2							
367.imagick	112	250	28.1	<u>250</u>	<u>28.1</u>	251	28.1							
370.mgrid331	112	285	15.5	<u>286</u>	<u>15.5</u>	286	15.5							
371.applu331	112	119	51.0	121	50.0	<u>120</u>	<u>50.5</u>							
372.smithwa	112	109	49.3	109	49.4	<u>109</u>	<u>49.3</u>							
376.kdtree	112	239	18.8	<u>239</u>	<u>18.9</u>	238	18.9							

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

Platform Notes

```

Sysinfo program /omp201903199/Docs/sysinfo
$Rev: 395 $ $Date:: 2012-07-25 $# 8f8c0fe9e19c658963a1e67685e50647
running on linux-fxye Tue Nov 20 00:52:50 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 8280 CPU @ 2.70GHz
 2 "physical id"s (chips)
 112 "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 : 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
cache size : 39424 KB

```

Continued on next page



SPEC OMPG2012 Result

Copyright 2012-2019 Standard Performance Evaluation Corporation

Huawei

Huawei 2288H V5 (Intel Xeon Platinum 8280, 2.7 GHz)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 25.9

OMP2012 license:27

Test sponsor: Huawei

Tested by: Huawei

Test date: Mar-2019

Hardware Availability: Jul-2017

Software Availability: Mar-2019

Platform Notes (Continued)

From /proc/meminfo

MemTotal: 394430744 kB

HugePages_Total: 0

Hugepagesize: 2048 kB

/usr/bin/lsb_release -d

SUSE Linux Enterprise Server 12 SP4

From /etc/*release* /etc/*version*

SuSE-release:

SUSE Linux Enterprise Server 12 (x86_64)

VERSION = 12

PATCHLEVEL = 4

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-SP4"

VERSION_ID="12.4"

PRETTY_NAME="SUSE Linux Enterprise Server 12 SP4"

ID="sles"

ANSI_COLOR="0;32"

CPE_NAME="cpe:/o:suse:sles:12:sp4"

uname -a:

Linux linux-fxye 4.12.14-94.41-default #1 SMP Wed Oct 31 12:25:04 UTC 2018 (3090901) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Nov 19 19:53

SPEC is set to: /omp201903199

```
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3       xfs   425G  55G  371G  13% /
```

Additional information from dmidecode:

BIOS INSYDE Corp. 6.36 02/15/2019

Memory:

24x Samsung M393A2K43CB2-CVF 16 GB 2933 MHz 2 rank

(End of data from sysinfo program)

General Notes

=====
BIOS settings notes:

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/transparent_hugepage/enabled

BIOS settings notes:

Intel HyperThreading Technology set to Enabled

CPU performance set to Enterprise

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/

Page 3



SPEC OMPG2012 Result

Copyright 2012-2019 Standard Performance Evaluation Corporation

Huawei

Huawei 2288H V5 (Intel Xeon Platinum 8280, 2.7 GHz)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 25.9

OMP2012 license:27
Test sponsor: Huawei
Tested by: Huawei

Test date: Mar-2019
Hardware Availability: Jul-2017
Software Availability: Mar-2019

General Notes (Continued)

Power Performance Tuning set to OS
Sub Numa Clustering (SNC) set to Disabled
IMC Interleaving set to Auto
General OMP Library Settings
ENV_KMP_LIBRARY=turnaround
ENV_OMP_SCHEDULE=static
ENV_KMP_BLOCKTIME=200
ENV_KMP_STACKSIZE=702M
ENV_OMP_DYNAMIC=FALSE
ENV_OMP_NESTED=FALSE

=====

General base OMP Library Settings

ENV_KMP_AFFINITY=compact,1

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

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Base Portability Flags

350.md: -FR
357.bt331: -mmodel=medium
363.swim: -mmodel=medium
367.imagick: -std=c99

Base Optimization Flags

C benchmarks:
-O3 -qopenmp -ipo -xCORE-AVX512 -ansi-alias

C++ benchmarks:
-O3 -qopenmp -ipo -xCORE-AVX512 -ansi-alias

Continued on next page



SPEC OMPG2012 Result

Copyright 2012-2019 Standard Performance Evaluation Corporation

Huawei

Huawei 2288H V5 (Intel Xeon Platinum 8280, 2.7 GHz)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 25.9

OMP2012 license:27

Test sponsor: Huawei

Tested by: Huawei

Test date: Mar-2019

Hardware Availability: Jul-2017

Software Availability: Mar-2019

Base Optimization Flags (Continued)

Fortran benchmarks:

`-O3 -qopenmp -ipo -xCORE-AVX512 -align array64byte`

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

<http://www.spec.org/omp2012/flags/Intel-ic18.0-linux64.20190329.html>

<http://www.spec.org/omp2012/flags/Huawei-Platform-Settings-Omp2012-Cascade-V1.0.html>

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

<http://www.spec.org/omp2012/flags/Intel-ic18.0-linux64.20190329.xml>

<http://www.spec.org/omp2012/flags/Huawei-Platform-Settings-Omp2012-Cascade-V1.0.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 webmaster@spec.org.

Tested with SPEC OMP2012 v1.0.
Report generated on Tue Apr 2 13:36:17 2019 by SPEC OMP2012 PS/PDF formatter v541.
Originally published on 2 April 2019.