



SPEC® OMPG2012 Result

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Cisco Systems

Cisco UCS C480 M5 (Intel Xeon Platinum 8280, 2.70 GHz)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 44.9

OMP2012 license:9019

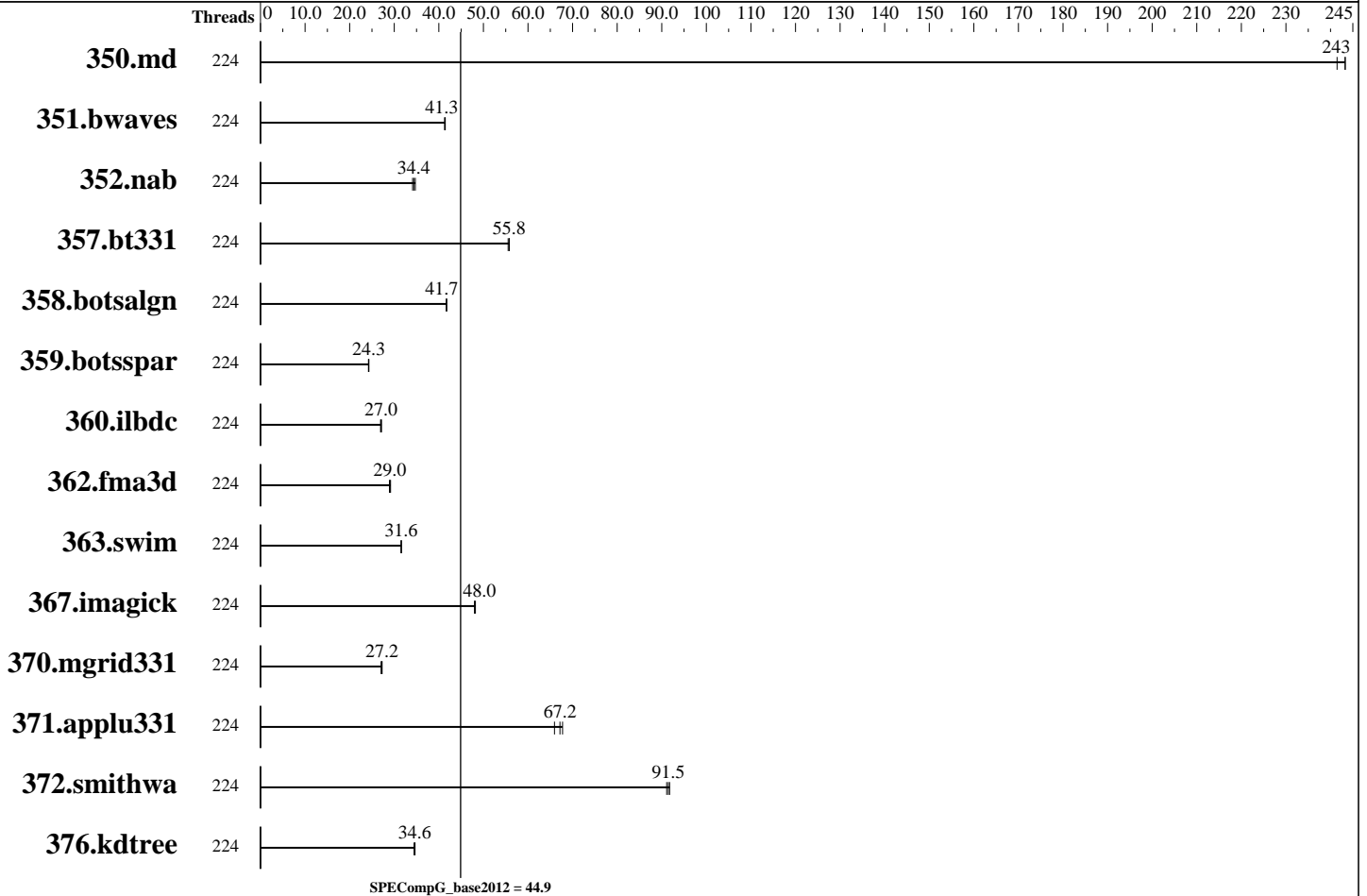
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Mar-2019

Hardware Availability: Apr-2019

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: 112 cores, 4 chips, 28 cores/chip, 2 threads/core
 CPU(s) orderable: 2,4 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: 1536 GB (48 x 32 GB 2Rx4 PC4-2933V-R)
 Disk Subsystem: 1 X 600 GB SAS HDD, 15K RPM
 Other Hardware: None
 Base Threads Run: 224
 Minimum Peak Threads: --

Continued on next page

Software

Operating System: SUSE Linux Enterprise Server 15 (x86_64)
 Compiler: C/C++/Fortran: Version 19.0.1.144 of Intel Composer for Linux Build 20181018
 Auto Parallel: No
 File System: xfs
 System State: Run Level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: Not Applicable
 Other Software: None



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Maximum Peak Threads: --

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
350.md	224	19.0	243	19.2	241	<u>19.0</u>	<u>243</u>							
351.bwaves	224	<u>110</u>	<u>41.3</u>	109	41.4	110	41.3							
352.nab	224	114	34.1	112	34.7	<u>113</u>	<u>34.4</u>							
357.bt331	224	85.3	55.5	<u>85.0</u>	<u>55.8</u>	84.9	55.8							
358.botsalgn	224	<u>104</u>	<u>41.7</u>	104	41.7	104	41.7							
359.botsspar	224	216	24.3	217	24.2	<u>216</u>	<u>24.3</u>							
360.ilbdc	224	132	26.9	<u>132</u>	<u>27.0</u>	131	27.1							
362.fma3d	224	<u>131</u>	<u>29.0</u>	130	29.2	131	28.9							
363.swim	224	143	31.6	144	31.5	<u>143</u>	<u>31.6</u>							
367.imagick	224	<u>146</u>	<u>48.0</u>	146	48.2	146	48.0							
370.mgrid331	224	163	27.0	162	27.3	<u>162</u>	<u>27.2</u>							
371.applu331	224	91.9	65.9	<u>90.2</u>	<u>67.2</u>	89.4	67.8							
372.smithwa	224	<u>58.6</u>	<u>91.5</u>	58.8	91.1	58.4	91.8							
376.kdtree	224	130	34.7	131	34.5	<u>130</u>	<u>34.6</u>							

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

Platform Notes

```

Sysinfo program /home/OMP2012/Docs/sysinfo
Revision 563 of 2016-06-10 (097295389cf6073d8c3b03fa376740a5)
running on linux-mz3p Fri Mar 8 02:30:13 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/omp2012/Docs/config.html#sysinfo>

From /proc/cpuinfo

```

model name : Intel(R) Xeon(R) Platinum 8280 CPU @ 2.70GHz
 4 "physical id"s (chips)
 224 "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
physical 2: 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

```

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Platform Notes (Continued)

```
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:      1583861556 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

```
From /etc/*release* /etc/*version*
os-release:
NAME="SLES"
VERSION="15"
VERSION_ID="15"
PRETTY_NAME="SUSE Linux Enterprise Server 15"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15"
```

```
uname -a:
Linux linux-mz3p 4.12.14-23-default #1 SMP Tue May 29 21:04:44 UTC 2018
(cd0437b) x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Mar 7 20:39
```

```
SPEC is set to: /home/OMP2012
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda2        xfs   549G   36G  513G   7% /
```

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 Cisco Systems, Inc. C480M5.4.0.3.17.0213191844 02/13/2019

Memory: 48x 0xCE00 M393A4K40CB2-CVF 32 GB 2 rank 2933 MT/s, configured at 2934 MT/s

(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 Turbo Boost Technology (Turbo) : Enabled
CPU performance set to Enterprise

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General Notes (Continued)

```

Power Performance Tuning set to OS
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
=====

```

Spectre and Meltdown

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

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Base Optimization Flags (Continued)

C++ benchmarks:

-O3 -qopenmp -ipo -xCORE-AVX512 -ansi-alias

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-ic19.0-linux64.html>

<http://www.spec.org/omp2012/flags/Cisco-Platform-Settings-V1.2-revH.html>

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

<http://www.spec.org/omp2012/flags/Intel-ic19.0-linux64.xml>

<http://www.spec.org/omp2012/flags/Cisco-Platform-Settings-V1.2-revH.xml>

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

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