



# SPEC® OMPG2012 Result

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## Cisco Systems

Cisco UCS C480 M5 (Intel Xeon Platinum 8180, 2.50 GHz)

SPECompG\_peak2012 = Not Run

SPECompG\_base2012 = 40.2

OMP2012 license:9019

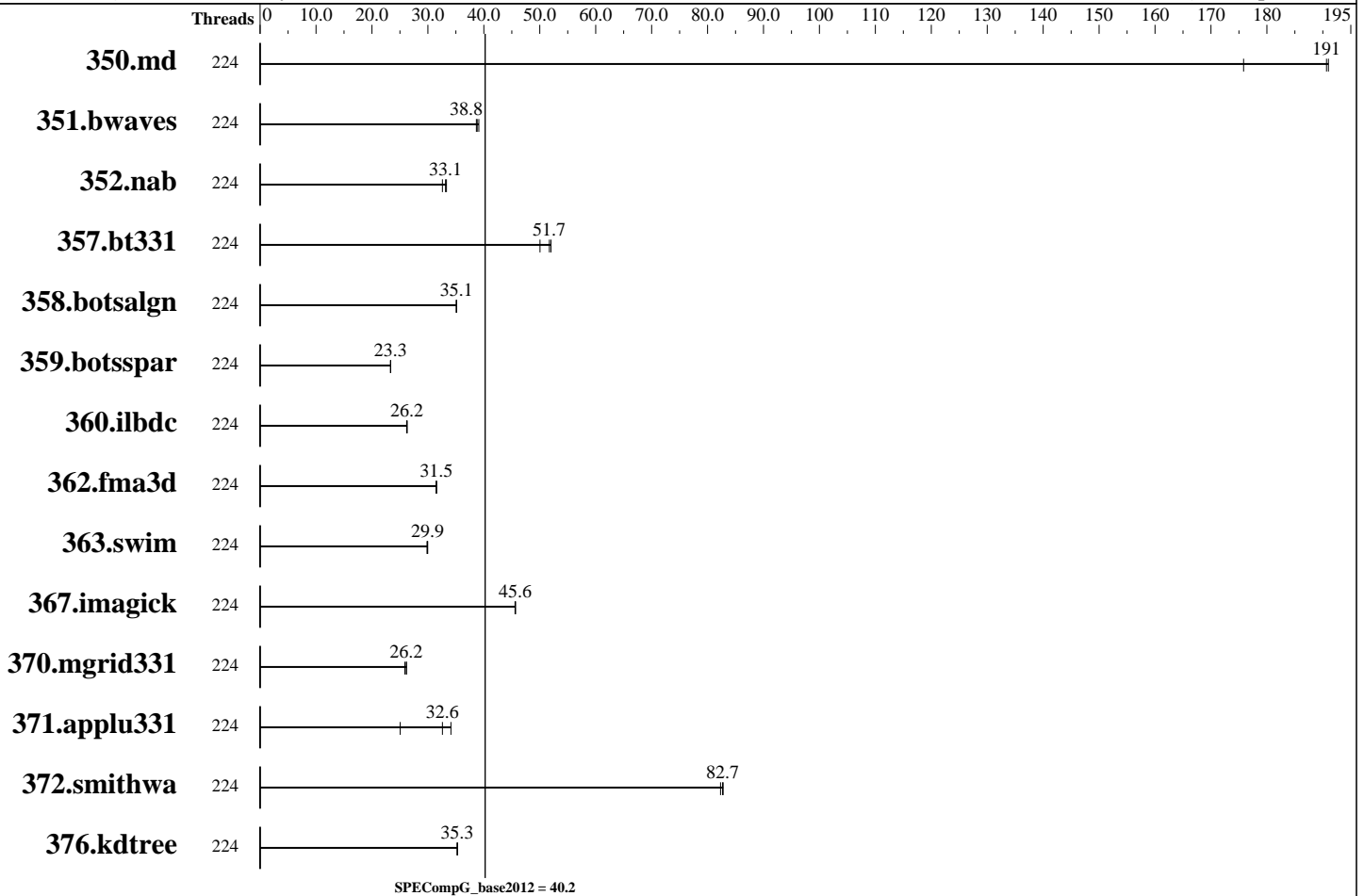
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Oct-2017

Hardware Availability: Aug-2017

Software Availability: Sep-2017



### 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: 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: 768 GB (48 x 16 GB 2Rx4 PC4-2666V-R)  
 Disk Subsystem: 1 X 480 GB SSD SAS  
 Other Hardware: None  
 Base Threads Run: 224  
 Minimum Peak Threads: --

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### Software

Operating System: SUSE Linux Enterprise Server 12 SP2 (x86\_64)  
 Compiler: C/C++/Fortran: Version 18.0.0.128 of Intel Composer for Linux Build 20170811  
 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	26.3	176	24.2	191	<b><u>24.3</u></b>	<b><u>191</u></b>							
351.bwaves	224	116	39.1	<b><u>117</u></b>	<b><u>38.8</u></b>	117	38.7							
352.nab	224	<b><u>117</u></b>	<b><u>33.1</u></b>	119	32.6	117	33.3							
357.bt331	224	94.7	50.0	<b><u>91.6</u></b>	<b><u>51.7</u></b>	91.1	52.0							
358.botsalgn	224	<b><u>124</u></b>	<b><u>35.1</u></b>	124	35.1	124	35.1							
359.botsspar	224	225	23.4	<b><u>225</u></b>	<b><u>23.3</u></b>	225	23.3							
360.ilbdc	224	135	26.3	136	26.2	<b><u>136</u></b>	<b><u>26.2</u></b>							
362.fma3d	224	120	31.5	<b><u>121</u></b>	<b><u>31.5</u></b>	121	31.5							
363.swim	224	152	29.8	151	30.0	<b><u>151</u></b>	<b><u>29.9</u></b>							
367.imagick	224	154	45.6	154	45.7	<b><u>154</u></b>	<b><u>45.6</u></b>							
370.mgrid331	224	<b><u>169</u></b>	<b><u>26.2</u></b>	171	25.9	169	26.2							
371.applu331	224	242	25.0	<b><u>186</u></b>	<b><u>32.6</u></b>	178	34.1							
372.smithwa	224	<b><u>64.8</u></b>	<b><u>82.7</u></b>	64.7	82.8	65.1	82.3							
376.kdtree	224	<b><u>128</u></b>	<b><u>35.3</u></b>	128	35.2	127	35.3							

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
$Rev: 395 $ $Date:: 2012-07-25 $# 8f8c0fe9e19c658963a1e67685e50647
running on C480-SLES12 Fri Oct 6 16:58:05 2017

```

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
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:      790981324 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

```
/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 12 SP2
```

```
From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 2
# 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-SP2"
VERSION_ID="12.2"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp2"
```

```
uname -a:
Linux C480-SLES12 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016
(9464f67) x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Oct 5 13:19
```

```
SPEC is set to: /home/omp2012
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3       xfs   404G   79G  326G  20% /home
```

```
Additional information from dmidecode:
BIOS Cisco Systems, Inc. C480M5.3.1.0.272.0613172154 06/13/2017
Memory:
48x 16 GB
48x 0xCE00 M393A2G40EB2-CTD 16 GB 2666 MHz 2 rank
```

(End of data from sysinfo program)



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## 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

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=16G

ENV\_OMP\_DYNAMIC=FALSE

ENV\_OMP\_NESTED=FALSE

=====  
General base OMP Library Settings

ENV\_KMP\_AFFINITY=compact,1

## 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 -xHost -ansi-alias

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## Base Optimization Flags (Continued)

C++ benchmarks:

-O3 -qopenmp -ipo -xHost -ansi-alias

Fortran benchmarks:

-O3 -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/Intel-ic18.0-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-ic18.0-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](mailto:webmaster@spec.org).

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