SPEC® OMPG2012 Result

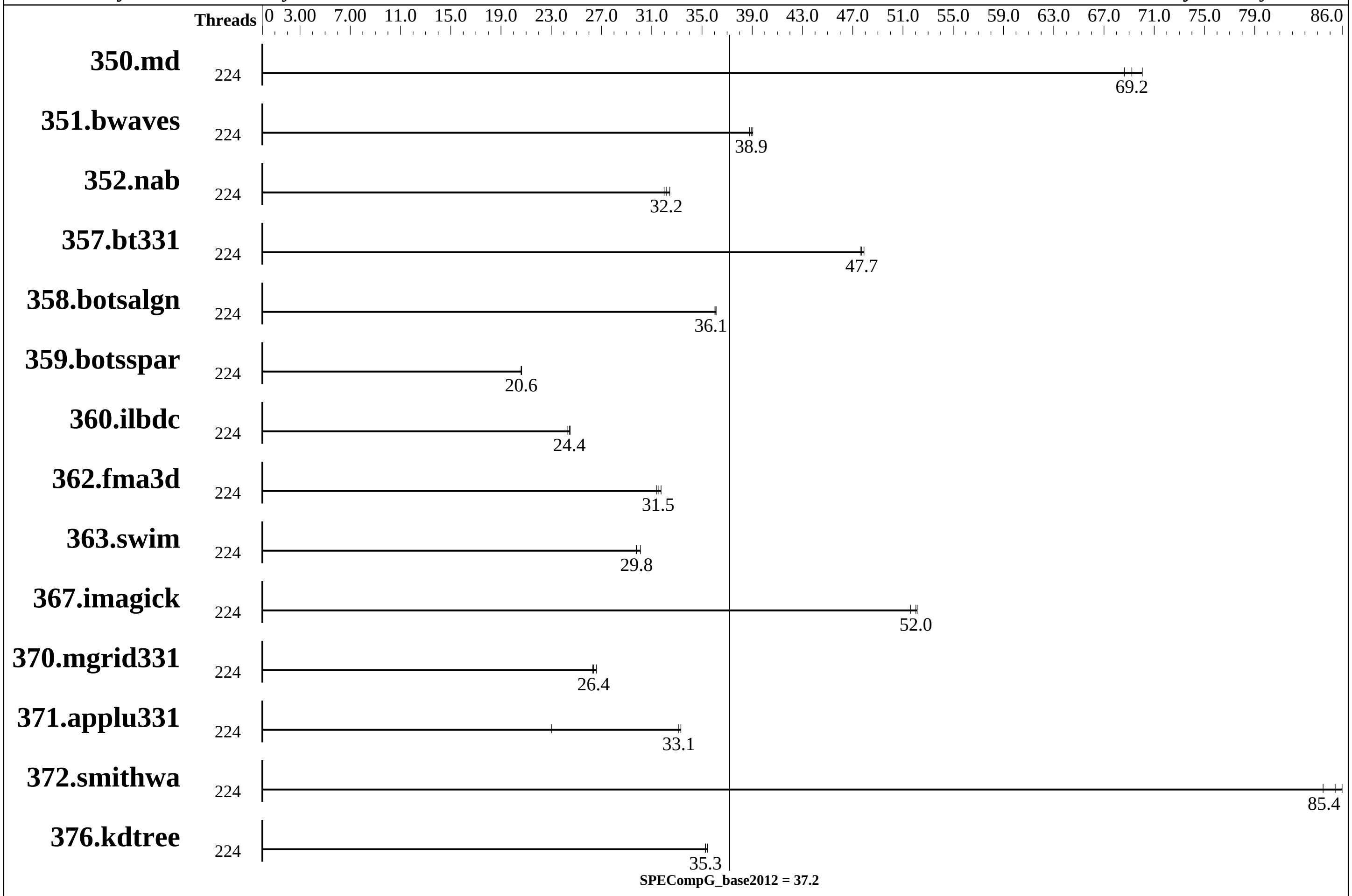
Cisco Systems

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

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 37.2

OMP2012 license:	9019	**Test date:**	Jun-2017
Test sponsor:	Cisco Systems	**Hardware Availability:**	Aug-2017
Tested by:	Cisco Systems	**Software Availability:**	May-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 400 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) Kernel 4.4.21-69-default
Compiler:	C/C++/Fortran: Version 17.0.4.196 of Intel Composer for Linux Build 20170411
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

	Base							Peak						
Benchmark	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
350.md	224	66.1	70.0	67.5	68.6	**66.9**	**69.2**							
351.bwaves	224	**116**	**38.9**	116	39.0	117	38.8							
352.nab	224	120	32.4	**121**	**32.2**	122	32.0							
357.bt331	224	**99.3**	**47.7**	99.5	47.6	99.0	47.9							
358.botsalgn	224	**121**	**36.1**	121	36.0	120	36.1							
359.botsspar	224	255	20.6	254	20.6	**255**	**20.6**							
360.ilbdc	224	147	24.3	145	24.5	**146**	**24.4**							
362.fma3d	224	121	31.4	**121**	**31.5**	120	31.7							
363.swim	224	**152**	**29.8**	152	29.8	150	30.1							
367.imagick	224	**135**	**52.0**	135	52.1	136	51.6							
370.mgrid331	224	**168**	**26.4**	168	26.3	166	26.6							
371.applu331	224	182	33.3	**183**	**33.1**	263	23.0							
372.smithwa	224	**62.8**	**85.4**	63.5	84.4	62.4	86.0							
376.kdtree	224	128	35.3	127	35.4	**128**	**35.3**							

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

Platform Notes

```
Sysinfo program /opt/omp2012/Docs/sysinfo
$Rev: 395 $ $Date:: 2012-07-25 #$ 8f8c0fe9e19c658963a1e67685e50647
running on linux-wjnw Wed Jun 14 18:26:08 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:       791192456 kB
     HugePages_Total:       0
     Hugepagesize:       2048 kB

  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 linux-wjnw 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 Jun 14 03:53

  SPEC is set to: /opt/omp2012
     Filesystem     Type  Size  Used Avail Use% Mounted on
     /dev/sda2      xfs   321G   40G  282G  13% /

  Additional information from dmidecode:
    BIOS Cisco Systems, Inc. C480M5.3.1.0.248.0518171057 05/18/2017
    Memory:
     48x   16 GB
     48x 0xCE00 M393A2G40EB2-CTD 16 GB 2666 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:
```

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General Notes (Continued)

```
    Intel Turbo Boost Technology (Turbo)  : Enabled
    CPU performance set to Enterprise
    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=8192M
    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: `-mcmodel=medium`
363.swim: `-mcmodel=medium`
367.imagick: `-std=c99`

Base Optimization Flags

C benchmarks:
`-O3 -openmp -ipo  -xCORE-AVX2 -ansi-alias`

C++ benchmarks:
`-O3 -openmp -ipo  -xCORE-AVX2 -ansi-alias`

Fortran benchmarks:
`-O3 -openmp -ipo  -xCORE-AVX2 -align array64byte`

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The flags file that was used to format this result can be browsed at
http://www.spec.org/omp2012/flags/Intel-ic13.0-linux64.20140219.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/omp2012/flags/Intel-ic13.0-linux64.20140219.xml

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

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