SPEC® OMPG2012 Result

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Cisco Systems

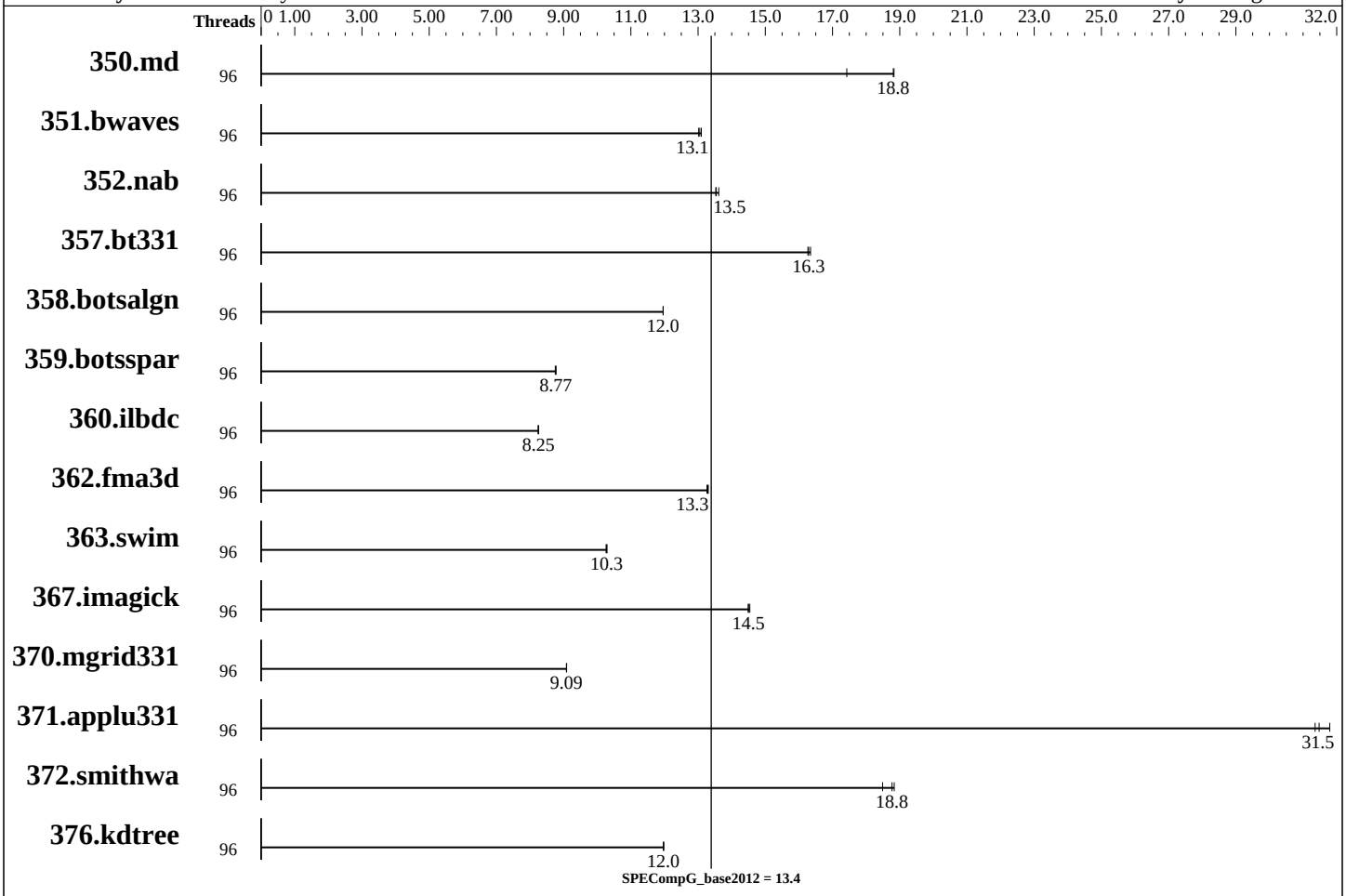
Cisco UCS B260 M4 (Intel Xeon E7-8890 v4, 2.20 GHz)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 13.4

OMP2012 license: 9019
Test sponsor: Cisco Systems
Tested by: Cisco Systems

Test date: May-2016
Hardware Availability: Jul-2016
Software Availability: Aug-2015



Hardware

CPU Name:	Intel Xeon E7-8890 v4
CPU Characteristics:	Intel Turbo Boost Technology up to 3.40 GHz
CPU MHz:	2200
CPU MHz Maximum:	3400
FPU:	Integrated
CPU(s) enabled:	48 cores, 2 chips, 24 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:	256 KB I+D on chip per core
L3 Cache:	60 MB I+D on chip per chip
Other Cache:	None
Memory:	256 GB (16 x 16 GB 2Rx4 PC4-2400T-R, running at 1600 MHz)
Disk Subsystem:	1 X 400 GB SSD SAS
Other Hardware:	None
Base Threads Run:	96

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Software

Operating System:	Red Hat Enterprise Linux 6.7 (Santiago), Kernel 2.6.32-573.el6.x86_64
Compiler:	C/C++/Fortran: Version 16.0.0.109 of Intel Composer for Linux Build 20150815
Auto Parallel:	No
File System:	Linux ext3
System State:	Default
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other Software:	None

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Minimum Peak Threads: --
Maximum Peak Threads: --

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
350.md	96	246	18.8	**246**	**18.8**	266	17.4							
351.bwaves	96	**347**	**13.1**	348	13.0	346	13.1							
352.nab	96	**287**	**13.5**	286	13.6	287	13.5							
357.bt331	96	291	16.3	290	16.3	**291**	**16.3**							
358.botsalgn	96	364	12.0	**364**	**12.0**	364	12.0							
359.botsspar	96	600	8.75	599	8.77	**599**	**8.77**							
360.ilbdc	96	**432**	**8.25**	431	8.25	432	8.24							
362.fma3d	96	287	13.3	**286**	**13.3**	286	13.3							
363.swim	96	**441**	**10.3**	440	10.3	441	10.3							
367.imagick	96	**485**	**14.5**	484	14.5	485	14.5							
370.mgrid331	96	**487**	**9.09**	486	9.09	487	9.08							
371.applu331	96	193	31.4	191	31.8	**193**	**31.5**							
372.smithwa	96	**286**	**18.8**	290	18.5	285	18.8							
376.kdtree	96	376	12.0	376	12.0	**376**	**12.0**							

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 RHEL Thu May 05 21:08:56 2016

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) CPU E7-8890 v4 @ 2.20GHz
      2 "physical id"s (chips)
      96 "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 : 24
      siblings  : 48
      physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26
      27 28 29
      physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26
      27 28 29
   cache size : 61440 KB
```

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Platform Notes (Continued)

```
From /proc/meminfo
   MemTotal:       264225480 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
   Red Hat Enterprise Linux Server release 6.7 (Santiago)

From /etc/*release* /etc/*version*
   redhat-release: Red Hat Enterprise Linux Server release 6.7 (Santiago)
   system-release: Red Hat Enterprise Linux Server release 6.7 (Santiago)
   system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
   Linux RHEL 2.6.32-573.el6.x86_64 #1 SMP Wed Jul 1 18:23:37 EDT 2015 x86_64
   x86_64 x86_64 GNU/Linux

run-level 3 May 05 20:56

SPEC is set to: /opt/omp2012
   Filesystem     Type  Size  Used Avail Use% Mounted on
   /dev/sda1      ext4  367G   28G  321G   8% /

Additional information from dmidecode:
  BIOS Cisco Systems, Inc. EXM4.3.1.1.3.042620161123 04/26/2016
  Memory:
   16x   16 GB
   16x 0xCE00 M393A2G40EB1-CRC 16 GB 1600 MHz 2 rank
   32x NO DIMM NO DIMM

(End of data from sysinfo program)
```

General Notes

```
------------------------------------------------------------------------
  Transparent Huge Pages enabled with:
  echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
BIOS settings notes:
  Intel Turbo Boost Technology (Turbo)  : Enabled
  CPU performance set to Enterprise
  Power Technology set to Performance
  Memory RAS configuration set to Maximum Performance
  Energy Performance BIAS setting set to OS
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
```

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General Notes (Continued)

```
================================================================================
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:
-O2 -openmp -ipo -xCORE-AVX2 -ansi-alias

C++ benchmarks:
-O2 -openmp -ipo -xCORE-AVX2 -ansi-alias

Fortran benchmarks:
-O2 -openmp -ipo -xCORE-AVX2 -align array64byte

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

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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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