SPEC® OMPG2012 Result

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Cisco Systems

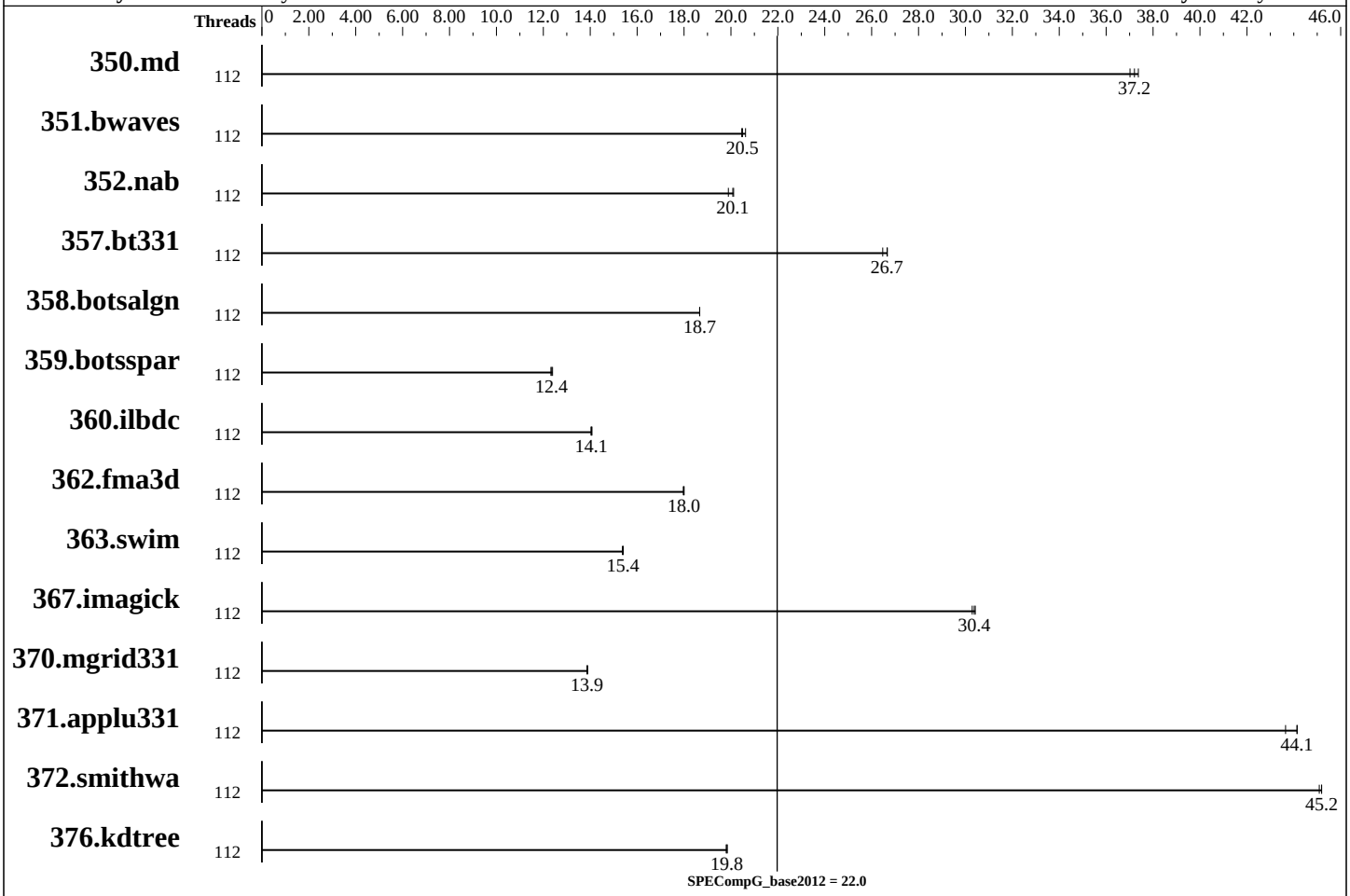
Cisco UCS C240 M5 (Intel Xeon Platinum 8180, 2.50 GHz)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 22.0

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

Test date: Jun-2017
Hardware Availability: Jul-2017
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:	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 2Rx4 PC4-2666V-R)
Disk Subsystem:	1 X 800 GB SSD SAS
Other Hardware:	None
Base Threads Run:	112
Minimum Peak Threads:	--

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Software

Operating System:	SUSE Linux Enterprise Server 12 SP2 (x86_64)
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

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
350.md	112	124	37.4	125	37.0	**124**	**37.2**							
351.bwaves	112	221	20.5	**221**	**20.5**	220	20.6							
352.nab	112	193	20.1	196	19.9	**194**	**20.1**							
357.bt331	112	178	26.7	179	26.5	**178**	**26.7**							
358.botsalgn	112	**233**	**18.7**	233	18.7	233	18.7							
359.botsspar	112	**425**	**12.4**	424	12.4	426	12.3							
360.ilbdc	112	253	14.1	254	14.0	**253**	**14.1**							
362.fma3d	112	211	18.0	211	18.0	**211**	**18.0**							
363.swim	112	**294**	**15.4**	295	15.4	294	15.4							
367.imagick	112	231	30.4	232	30.3	**231**	**30.4**							
370.mgrid331	112	**319**	**13.9**	318	13.9	319	13.9							
371.applu331	112	139	43.7	137	44.1	**137**	**44.1**							
372.smithwa	112	119	45.1	**119**	**45.2**	119	45.2							
376.kdtree	112	227	19.8	**227**	**19.8**	227	19.8							

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-0s5q Mon Jun 19 11:21:18 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
      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
```

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Platform Notes (Continued)

```
From /proc/meminfo
   MemTotal:       394863296 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-0s5q 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 19 11:20

SPEC is set to: /opt/omp2012
   Filesystem     Type  Size  Used Avail Use% Mounted on
   /dev/sdb2      xfs   700G   29G  672G   5% /

Additional information from dmidecode:
  BIOS Cisco Systems, Inc. C240M5.3.1.0.275.0519172339 05/19/2017
  Memory:
   24x   16 GB
   24x 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:
  Intel Turbo Boost Technology (Turbo)  : Enabled
  CPU performance set to Enterprise
  Power Performance Tuning set to OS
  SNC set to Disabled
```

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General Notes (Continued)

```
    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

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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