SPEC® OMPG2012 Result
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Cisco Systems

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

SPECompG_peak2012 = Not Run
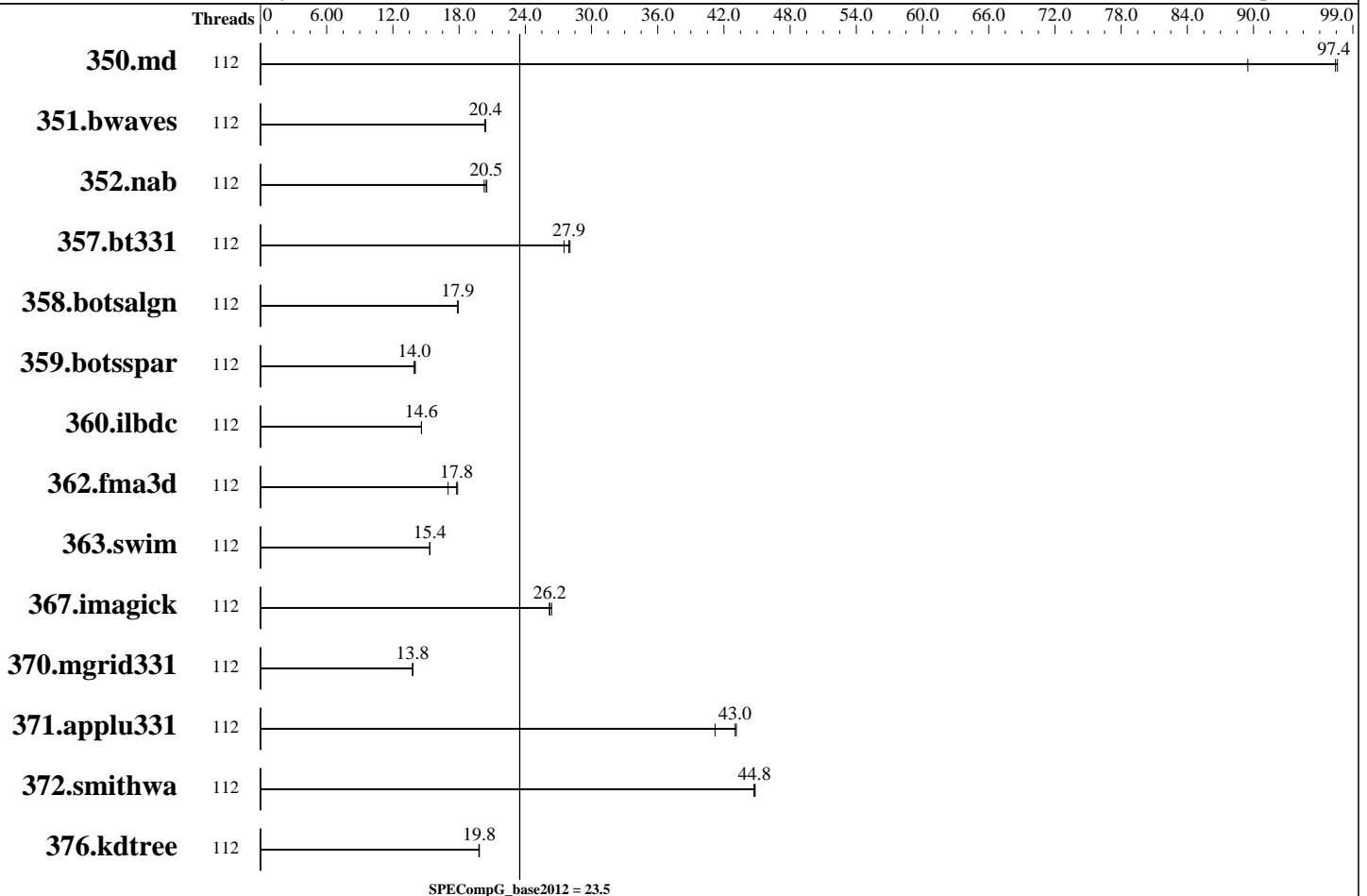
SPECompG_base2012 =   23.5

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

Test date: Oct-2017
Hardware Availability: Jul-2017
Software Availability: Sep-2017

Threads		
350.md	112	97.4
351.bwaves	112	20.4
352.nab	112	20.5
357.bt331	112	27.9
358.botsalgn	112	17.9
359.botsspar	112	14.0
360.ilbdc	112	14.6
362.fma3d	112	17.8
363.swim	112	15.4
367.imagick	112	26.2
370.mgrid331	112	13.8
371.applu331	112	43.0
372.smithwa	112	44.8
376.kdtree	112	19.8

SPECompG_base2012 = 23.5

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:	--

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	112	51.7	89.5	**47.5**	**97.4**	47.4	97.6							
351.bwaves	112	223	20.3	**222**	**20.4**	222	20.4							
352.nab	112	192	20.3	190	20.5	**190**	**20.5**							
357.bt331	112	172	27.5	**170**	**27.9**	169	28.1							
358.botsalgn	112	243	17.9	**243**	**17.9**	243	17.9							
359.botsspar	112	374	14.0	377	13.9	**376**	**14.0**							
360.ilbdc	112	**244**	**14.6**	244	14.6	244	14.6							
362.fma3d	112	**214**	**17.8**	213	17.9	223	17.0							
363.swim	112	**295**	**15.4**	296	15.3	295	15.4							
367.imagick	112	269	26.2	266	26.4	**268**	**26.2**							
370.mgrid331	112	320	13.8	321	13.8	**321**	**13.8**							
371.applu331	112	147	41.2	141	43.1	**141**	**43.0**							
372.smithwa	112	120	44.8	**120**	**44.8**	120	44.7							
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 /home/omp2012/Docs/sysinfo
    $Rev: 395 $ $Date:: 2012-07-25 #$ 8f8c0fe9e19c658963a1e67685e50647
    running on linux-nsv2 Sun Oct  8 12:05:26 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:       394865508 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 linux-nsv2 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 8 11:48

SPEC is set to: /home/omp2012
   Filesystem      Type  Size  Used Avail Use% Mounted on
   /dev/sda3       xfs   517G  381G  137G  74% /home

Additional information from dmidecode:
  BIOS Cisco Systems, Inc. C240M5.3.1.1a.0.0607170937 06/07/2017
  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 HyperThreading Technology set to Enabled
```
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General Notes (Continued)

```
    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=702M
    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 -qopenmp -ipo -xHost -ansi-alias

C++ benchmarks:
    -O3 -qopenmp -ipo -xHost -ansi-alias

Fortran benchmarks:
    -O3 -qopenmp -ipo -xHost -align array64byte

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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.

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