SPEC® OMPG2012 Result

Copyright 2012-2015 Standard Performance Evaluation Corporation

Cisco Systems

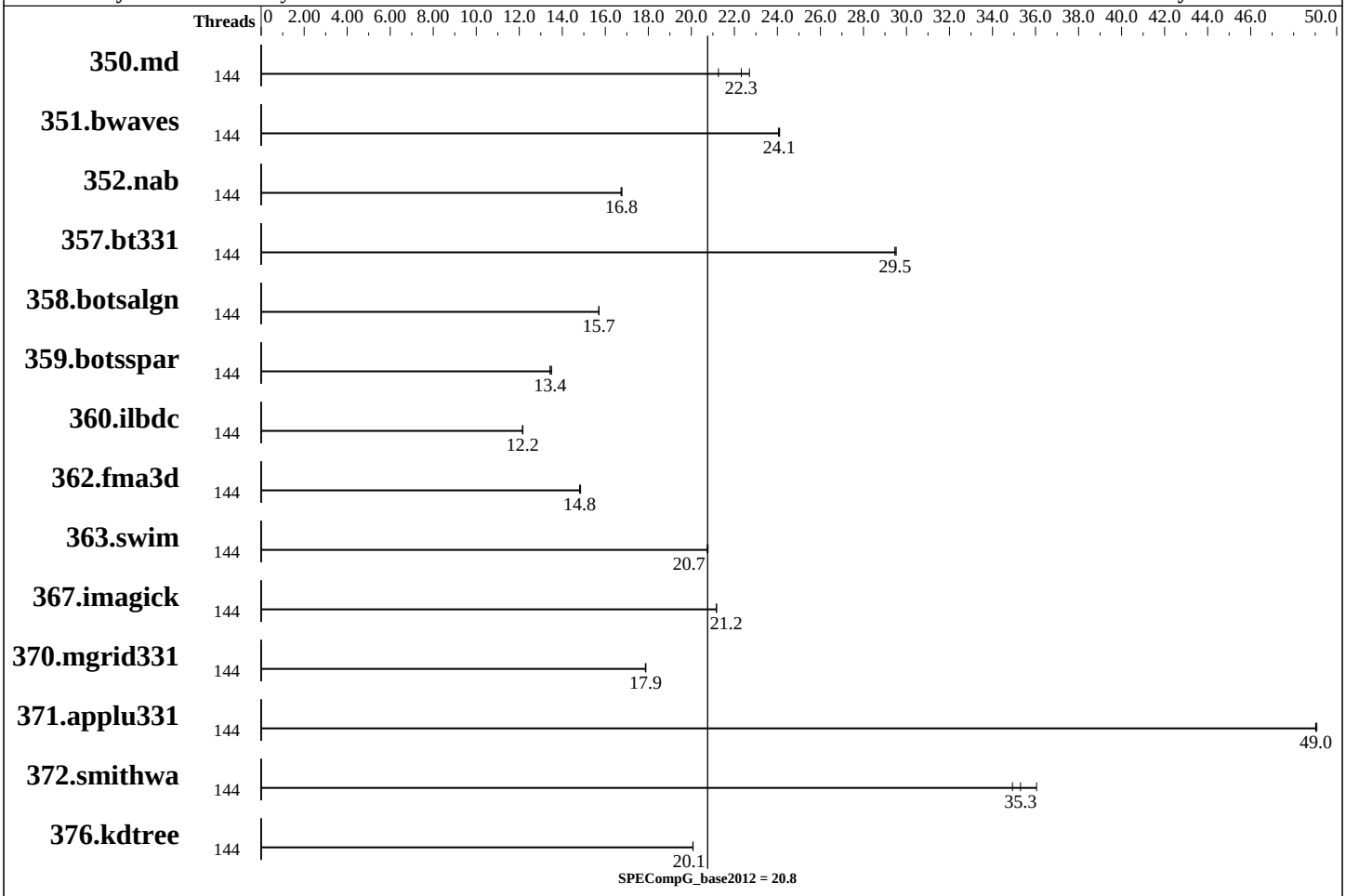
Cisco UCS C460 M4 (Intel Xeon E7-8890 v3, 2.50 GHz)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 20.8

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

Test date: May-2015
Hardware Availability: May-2015
Software Availability: Jul-2014



Hardware

CPU Name:	Intel Xeon E7-8890 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.30 GHz
CPU MHz:	2500
CPU MHz Maximum:	3300
FPU:	Integrated
CPU(s) enabled:	72 cores, 4 chips, 18 cores/chip, 2 threads/core
CPU(s) orderable:	1,2,3,4 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	45 MB I+D on chip per chip
Other Cache:	None
Memory:	1 TB (64 x 16 2Rx4 PC4-2133P-R, running at 1600 MHz)
Disk Subsystem:	1 X 1 TB SAS, 10K RPM
Other Hardware:	--
Base Threads Run:	144

Continued on next page

Software

Operating System:	SUSE Linux Enterprise Server 11 SP3 (x86_64)
Compiler:	C/C++/Fortran: Version 15.0.0.90 of Intel Composer XE for Linux Build 20140723
Auto Parallel:	No
File System:	Linux ext3
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other Software:	Kernel 3.0.76-0.11-default

SPEC OMPG2012 Result

Copyright 2012-2015 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C460 M4 (Intel Xeon E7-8890 v3, 2.50 GHz)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 20.8

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

Test date: May-2015
Hardware Availability: May-2015
Software Availability: Jul-2014

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	144	218	21.3	**207**	**22.3**	204	22.7							
351.bwaves	144	188	24.1	**188**	**24.1**	188	24.1							
352.nab	144	233	16.7	232	16.8	**232**	**16.8**							
357.bt331	144	**161**	**29.5**	161	29.5	161	29.5							
358.botsalgn	144	277	15.7	**277**	**15.7**	277	15.7							
359.botsspar	144	**391**	**13.4**	389	13.5	391	13.4							
360.ilbdc	144	293	12.2	**293**	**12.2**	293	12.1							
362.fma3d	144	**257**	**14.8**	257	14.8	256	14.9							
363.swim	144	218	20.7	218	20.8	**218**	**20.7**							
367.imagick	144	332	21.2	**332**	**21.2**	332	21.2							
370.mgrid331	144	247	17.9	247	17.9	**247**	**17.9**							
371.applu331	144	124	49.0	123	49.1	**124**	**49.0**							
372.smithwa	144	**152**	**35.3**	149	36.0	153	34.9							
376.kdtree	144	**224**	**20.1**	224	20.1	224	20.1							

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 sles11sp3 Sun May  3 22:45:13 2015

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 v3 @ 2.50GHz
      4 "physical id"s (chips)
      144 "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 : 18
      siblings  : 36
      physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
      physical 1: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
      physical 2: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
      physical 3: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
   cache size : 46080 KB
```

Continued on next page

Platform Notes (Continued)

```
From /proc/meminfo
   MemTotal:       1058693944 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

From /etc/*release* /etc/*version*
   SuSE-release:
      SUSE Linux Enterprise Server 11 (x86_64)
      VERSION = 11
      PATCHLEVEL = 3

uname -a:
   Linux sles11sp3 3.0.76-0.11-default #1 SMP Fri Jun 14 08:21:43 UTC 2013
   (ccab990) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 May 2 16:40 last=S

SPEC is set to: /opt/omp2012
   Filesystem     Type  Size  Used Avail Use% Mounted on
   /dev/sda2      ext3  804G   43G  721G   6% /

Additional information from dmidecode:
  BIOS Cisco Systems, Inc. C460M4.2.0.4.20.040420150215 04/04/2015
  Memory:
   64x   16 GB
   64x 0xCE00 M393A2G40DB0-CPB 16 GB 1600 MHz
   32x NO DIMM NO DIMM   1600 MHz

(End of data from sysinfo program)
```

General Notes

```
------------------------------------------------------------------------
BIOS settings notes:
  Intel Turbo Boost Technology (Turbo)  : Enabled
  Transparent Huge Pages enabled with:
  echo always > /sys/kernel/mm/transparent_hugepage/enabled
  CPU performance set to Enterprise
  Processor Power State set to C0/C1
  Power Technology set to Performance
  Memory RAS configuration set to Maximum Performance
  Energy Performance BIAS setting set to Balanced Performance
  Memory Power Saving Mode set to Disabled
General OMP Library Settings
  ENV_KMP_LIBRARY=turnaround
  ENV_OMP_SCHEDULE=static
  ENV_KMP_BLOCKTIME=infinite
  ENV_OMP_DYNAMIC=FALSE
  ENV_OMP_NESTED=FALSE
```

Continued on next page

General Notes (Continued)

```
================================================================================
General base OMP Library Settings
  ENV_KMP_AFFINITY=compact,0

================================================================================
General peak OMP Library Settings
  ENV_KMP_AFFINITY=compact,0

================================================================================
Per benchmark peak OMP Library Settings

================================================================================
351.bwaves:peak:
  ENV_KMP_AFFINITY=compact,1
  ENV_OMP_SCHEDULE=static,1

================================================================================
362.fma3d:peak:
  ENV_KMP_AFFINITY=compact,1
  ENV_OMP_SCHEDULE=guided

================================================================================
  ENV_OMP_SCHEDULE=static,1

================================================================================
363.swim:peak:
  ENV_KMP_AFFINITY=compact,1

================================================================================
372.smithwa:peak:
  ENV_KMP_AFFINITY=compact,1
```

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Base Portability Flags

350.md: -FR

Continued on next page

Base Portability Flags (Continued)

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`

SPEC is a registered trademark of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC OMP2012 v1.0.
Report generated on Wed Jun 10 11:48:20 2015 by SPEC OMP2012 PS/PDF formatter v541.
Originally published on 10 June 2015.