



SPEC® OMPG2012 Result

Copyright 2012-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4890 v2 @ 2.80 GHz)

SPECompG_peak2012 = 9.66

SPECompG_base2012 = 8.91

OMP2012 license:9019

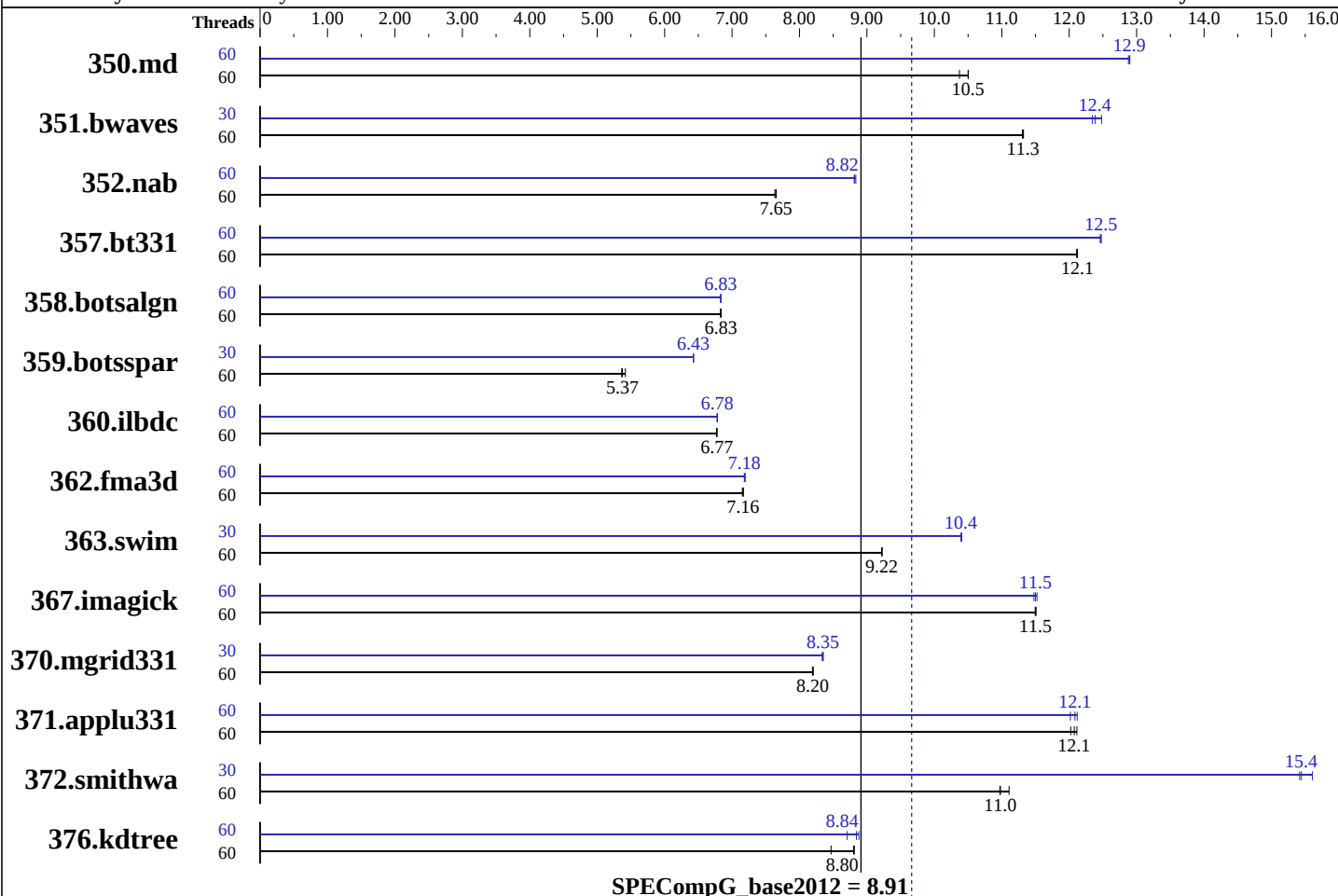
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Feb-2014

Hardware Availability: May-2014

Software Availability: Oct-2013



SPECompG_base2012 = 8.91

SPECompG_peak2012 = 9.66

Hardware

CPU Name: Intel Xeon E7-4890 v2
CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz
CPU MHz: 2800
CPU MHz Maximum: 3400
FPU: Integrated
CPU(s) enabled: 30 cores, 2 chips, 15 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: 38400 KB I+D on chip per chip
Other Cache: None
Memory: 256 GB (32 x 8 GB 2Rx4 PC3-12800R-11, ECC, and CL11)
Disk Subsystem: 1 x 300 GB 15000 RPM SAS
Other Hardware: --
Base Threads Run: 60

Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server release 6.4
Compiler: C/C++/Fortran: Version 14.0.1.106 of Intel Composer XE for Linux Build 20131008
Auto Parallel: No
File System: Linux ext4
System State: Default
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: Kernel 2.6.32-358.el6.x86_64



SPEC OMPG2012 Result

Copyright 2012-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4890 v2 @ 2.80 GHz)

SPECompG_peak2012 = 9.66

SPECompG_base2012 = 8.91

OMP2012 license:9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Feb-2014

Hardware Availability: May-2014

Software Availability: Oct-2013

Minimum Peak Threads: 30

Maximum Peak Threads: 60

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
350.md	60	446	10.4	441	10.5	441	10.5	60	360	12.9	359	12.9	359	12.9
351.bwaves	60	400	11.3	401	11.3	400	11.3	30	366	12.4	367	12.3	363	12.5
352.nab	60	508	7.65	509	7.64	508	7.65	60	440	8.84	441	8.81	441	8.82
357.bt331	60	391	12.1	391	12.1	391	12.1	60	380	12.5	380	12.5	380	12.5
358.botsalgn	60	637	6.83	636	6.83	636	6.83	60	637	6.83	637	6.83	637	6.83
359.botsspar	60	969	5.42	977	5.37	979	5.36	30	817	6.43	817	6.43	817	6.43
360.ilbdc	60	525	6.78	526	6.77	525	6.77	60	525	6.78	525	6.78	525	6.78
362.fma3d	60	531	7.16	531	7.15	530	7.17	60	529	7.18	528	7.20	529	7.18
363.swim	60	491	9.22	491	9.22	491	9.22	30	436	10.4	436	10.4	435	10.4
367.imagick	60	611	11.5	611	11.5	612	11.5	60	610	11.5	613	11.5	611	11.5
370.mgrid331	60	539	8.20	540	8.19	539	8.20	30	529	8.35	530	8.34	529	8.35
371.applu331	60	502	12.1	500	12.1	504	12.0	60	501	12.1	504	12.0	500	12.1
372.smithwa	60	489	11.0	488	11.0	483	11.1	30	347	15.4	348	15.4	343	15.6
376.kdtree	60	511	8.80	511	8.81	531	8.47	60	517	8.71	507	8.88	509	8.84

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 specomp Sun Feb 9 13:36:06 2014

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 E7-4890 v2 @ 2.80GHz
 2 "physical id"s (chips)
60 "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 : 15
siblings : 30
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
cache size : 38400 KB
```

From /proc/meminfo

Continued on next page



SPEC OMPG2012 Result

Copyright 2012-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4890 v2 @ 2.80 GHz)

SPECompG_peak2012 = 9.66

SPECompG_base2012 = 8.91

OMP2012 license:9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Feb-2014

Hardware Availability: May-2014

Software Availability: Oct-2013

Platform Notes (Continued)

MemTotal: 264101684 kB

HugePages_Total: 0

Hugepagesize: 2048 kB

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.4 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux specomp 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013
x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Feb 9 09:45
```

SPEC is set to: /opt/omp2012

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda1	ext4	275G	23G	238G	9%	/

Additional information from dmidecode:

BIOS Cisco Systems, Inc. EXM4-1.2.2.1.12.012920142034 01/29/2014

Memory:

32x 8 GB

32x 0xCE00 M393B1K70QB0-YK0 8 GB 1333 MHz 2 rank

16x NO DIMM NO DIMM

(End of data from sysinfo program)

General Notes

```
=====
BIOS settings notes:
Intel Turbo Boost Technology (Turbo) : Enabled
CPU Performance set to Enterprise
Power Technology set to Custom
General OMP Library Settings
KMP_STACKSIZE=8192M
OMP_DYNAMIC=FALSE
OMP_NESTED=FALSE
```

```
=====
General base OMP Library Settings
KMP_AFFINITY=compact,0,granularity=fine
```

```
=====
General peak OMP Library Settings
KMP_AFFINITY=compact,0,granularity=fine
```

Continued on next page



SPEC OMPG2012 Result

Copyright 2012-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4890 v2 @ 2.80 GHz)

SPECompG_peak2012 = 9.66

SPECompG_base2012 = 8.91

OMP2012 license:9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Feb-2014

Hardware Availability: May-2014

Software Availability: Oct-2013

General Notes (Continued)

=====

Per benchmark peak OMP Library Settings

Submitted_by: Rajendra Yogendra<ryogendr@cisco.com>

Submitted: Tue Mar 18 13:48:44 EDT 2014

Submission: omp2012-20140227-00049.sub

=====

351.bwaves:peak:

KMP_AFFINITY=compact,1,granularity=fine

OMP_SCHEDULE=static,1

=====

357.bt331=peak=default=default:

OMP_SCHEDULE=static,1

FOPTIMIZE=-fp-model fast=2 -no-prec-div -no-prec-sqrt -align array64byte

=====

359.botsspar:peak:

KMP_AFFINITY=compact,1,granularity=fine

OMP_SCHEDULE=guided

=====

362.fma3d:peak:

OMP_SCHEDULE=static,1

=====

363.swim:peak:

KMP_AFFINITY=compact,1,granularity=fine

=====

370.mgrid331:peak:

KMP_AFFINITY=compact,1,granularity=fine

=====

372.smithwa:peak:

KMP_AFFINITY=compact,1,granularity=fine

Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort



SPEC OMPG2012 Result

Copyright 2012-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4890 v2 @ 2.80 GHz)

SPECompG_peak2012 = 9.66

SPECompG_base2012 = 8.91

OMP2012 license:9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Feb-2014

Hardware Availability: May-2014

Software Availability: Oct-2013

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 -xAVX -ansi-alias
C++ benchmarks:
-O2 -openmp -ipo -xAVX -ansi-alias
Fortran benchmarks:
-O2 -openmp -ipo -xAVX -align array64byte

Peak Compiler Invocation

C benchmarks:
icc
C++ benchmarks:
icpc
Fortran benchmarks:
ifort

Peak Portability Flags

350.md: -FR
357.bt331: -mcmodel=medium
363.swim: -mcmodel=medium
367.imagick: -std=c99

Peak Optimization Flags

C benchmarks:
352.nab: -O3 -openmp -ipo -xAVX -fno-alias -opt-malloc-options=1
-opt-calloc -fp-model fast=2 -no-prec-div -no-prec-sqrt
-ansi-alias

Continued on next page



SPEC OMPG2012 Result

Copyright 2012-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4890 v2 @ 2.80 GHz)

SPECompG_peak2012 = 9.66

SPECompG_base2012 = 8.91

OMP2012 license:9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Feb-2014

Hardware Availability: May-2014

Software Availability: Oct-2013

Peak Optimization Flags (Continued)

358.botsalgn: -O2 -openmp -ipo -xAVX -ansi-alias

359.botsspar: -O3 -openmp -ipo -xAVX -fno-alias -ansi-alias

367.imagick: Same as 358.botsalgn

372.smithwa: -O2 -openmp -ipo -xSSE4.2 -fno-alias
-opt-streaming-stores always -opt-malloc-options=1
-ansi-alias

C++ benchmarks:

-O3 -openmp -ipo -xAVX -fno-alias -ansi-alias

Fortran benchmarks:

350.md: -O2 -openmp -ipo -xAVX -fno-alias -opt-malloc-options=1
-fp-model fast=2 -no-prec-div -no-prec-sqrt
-align array64byte

351.bwaves: -O3 -openmp -ipo -xAVX -fno-alias -fp-model fast=2
-no-prec-div -no-prec-sqrt -align array64byte

357.bt331: Same as 351.bwaves

360.ilbdc: -O3 -openmp -ipo -xAVX -opt-malloc-options=1
-align array64byte

362.fma3d: -O3 -openmp -ipo -xAVX -fno-alias -align array64byte

363.swim: -O3 -openmp -ipo -xSSE4.2 -fno-alias
-opt-streaming-stores always -opt-malloc-options=3
-align array64byte

370.mgrid331: -O2 -openmp -ipo -xSSE4.2 -fno-alias
-opt-malloc-options=3 -align array64byte

371.applu331: -O2 -openmp -ipo -xAVX -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-linux64.20130910.html>

You can also download the XML flags source by saving the following link:
<http://www.spec.org/omp2012/flags/Intel-ic13.0-linux64.20130910.xml>



SPEC OMPG2012 Result

Copyright 2012-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4890 v2 @ 2.80 GHz)

SPECompG_peak2012 = 9.66

SPECompG_base2012 = 8.91

OMP2012 license:9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Feb-2014

Hardware Availability: May-2014

Software Availability: Oct-2013

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 Tue Jul 22 13:37:51 2014 by SPEC OMP2012 PS/PDF formatter v541.
Originally published on 28 March 2014.