



SPEC® OMPG2012 Result

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Intel

SPECompG_peak2012 = 4.90

Intel R2208GZ4GC (Intel Xeon E5-2670)

SPECompG_base2012 = 4.63

OMP2012 license:13

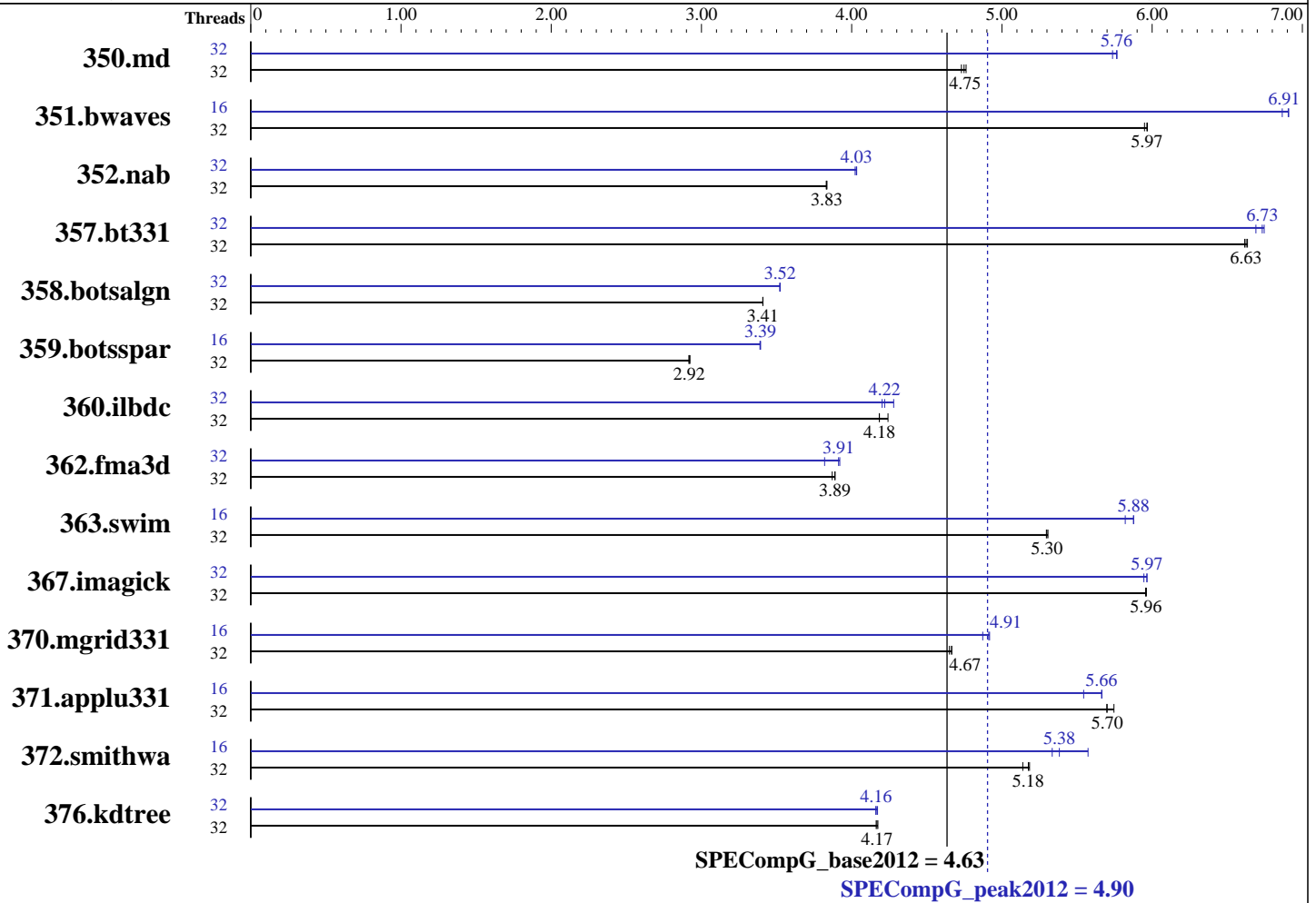
Test sponsor: Intel

Tested by: Intel

Test date: Feb-2013

Hardware Availability: Nov-2012

Software Availability: Jan-2013



Hardware

CPU Name: Intel Xeon E5-2670
 CPU Characteristics: 2600
 CPU MHz: 3300
 CPU MHz Maximum: 3300
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 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: 20 MB I+D on chip per chip
 Other Cache: None
 Memory: 64 GB (8 x 8 GB 2Rx4 PC3-12800R-11, ECC)
 Disk Subsystem: Panasas ActiveStor 3050 Fileserver 64 disks, 250GB/disk, 16TB total, 4 Shelves connected via 1Gbps Ethernet
 Other Hardware: --

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Software

Operating System: Red Hat Enterprise Linux Server release 6.1(Santiago)
 Compiler: C/C++/Fortran: Version 13.1.0.146 of Intel Composer XE for Linux Build 20130121
 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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Base Threads Run: 32
Minimum Peak Threads: 16
Maximum Peak Threads: 32

Results Table

Benchmark	Base						Peak							
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
350.md	32	979	4.73	<u>975</u>	<u>4.75</u>	972	4.76	32	<u>803</u>	<u>5.76</u>	803	5.77	807	5.74
351.bwaves	32	759	5.97	761	5.95	759	5.97	16	656	6.91	656	6.91	660	6.87
352.nab	32	1016	3.83	1014	3.83	1014	3.83	32	<u>965</u>	<u>4.03</u>	964	4.03	967	4.02
357.bt331	32	716	6.62	<u>715</u>	6.63	714	6.63	32	<u>704</u>	6.73	703	6.75	708	6.69
358.botsalgn	32	1276	3.41	1276	3.41	1276	3.41	32	<u>1235</u>	<u>3.52</u>	1234	3.52	1235	3.52
359.botsspar	32	1796	2.92	1799	2.92	1800	2.92	16	1548	3.39	1547	3.39	1549	3.39
360.ilbdc	32	839	4.24	851	4.18	851	4.18	32	<u>844</u>	<u>4.22</u>	832	4.28	847	4.20
362.fma3d	32	982	3.87	<u>977</u>	3.89	977	3.89	32	969	3.92	<u>971</u>	3.91	995	3.82
363.swim	32	855	5.30	854	5.31	855	5.30	16	771	5.88	<u>771</u>	5.88	778	5.82
367.imagick	32	1180	5.96	1180	5.96	1179	5.96	32	<u>1179</u>	5.97	1178	5.97	1182	5.95
370.mgrid331	32	950	4.65	<u>947</u>	4.67	947	4.67	16	<u>900</u>	<u>4.91</u>	899	4.92	907	4.87
371.applu331	32	1063	5.70	1055	5.75	1063	5.70	16	1070	5.67	<u>1070</u>	5.66	1093	5.54
372.smithwa	32	1034	5.18	1036	5.18	1043	5.14	16	1005	5.33	962	5.57	<u>996</u>	5.38
376.kdtree	32	1078	4.17	1080	4.17	1081	4.16	32	1079	4.17	<u>1081</u>	4.16	1082	4.16

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Platform Notes

Sysinfo program /panfs/panfs2/home2/aknyazel/OMP2012/1.0/Docs/sysinfo
\$Rev: 395 \$ \$Date:: 2012-07-25 # \$ 8f8c0fe9e19c658963ale67685e50647
running on esg263 Mon Feb 25 23:54:35 2013

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 E5-2670 0 @ 2.60GHz
 2 "physical id"s (chips)
 32 "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 : 8
siblings : 16
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7
cache size : 20480 KB
```

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Platform Notes (Continued)

From /proc/meminfo

MemTotal: 66055220 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*

redhat-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:

Linux esg263 2.6.32-131.0.15.el6.x86_64.crt.1 #3 SMP Fri May 20 16:57:43 PDT
2011 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Feb 22 08:04

SPEC is set to: /panfs/panfs2/home2/aknyazel/OMP2012/1.0

```
Filesystem      Type      Size  Used Avail Use% Mounted on
panfs://36.107.212.1/home2
                panfs     14T   9.1T  4.7T  67% /panfs/panfs2/home2
```

Cannot run dmidecode; consider saying 'chmod +s /usr/sbin/dmidecode'

(End of data from sysinfo program)

General Notes

=====
BIOS settings notes:
Intel Turbo Boost Technology (Turbo) : Enabled

=====
General OMP Library Settings
ENV_KMP_LIBRARY=turnaround
ENV_KMP_STACKSIZE=256M
ENV_KMP_BLOCKTIME=infinite
ENV_OMP_DYNAMIC=FALSE
ENV_OMP_NESTED=FALSE

=====
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

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General Notes (Continued)

351.bwaves:peak:

ENV_KMP_AFFINITY=compact,1

359.botsspar:peak:

ENV_KMP_AFFINITY=compact,1

363.swim:peak:

ENV_KMP_AFFINITY=compact,1

371.applu331: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
357.bt331: -mmodel=medium
363.swim: -mmodel=medium
367.imagick: -std=c99

Base Optimization Flags

C benchmarks:

-O2 -openmp -ipo -xAVX -ansi-alias

C++ benchmarks:

-O2 -openmp -ipo -xAVX -ansi-alias

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Base Optimization Flags (Continued)

Fortran benchmarks:

-O2 -openmp -ipo -xAVX

Peak Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Peak Portability Flags

350.md: -FR
357.bt331: -mmodel=medium
363.swin: -mmodel=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
358.botsalgn: -O3 -openmp -ipo -xSSE4.2 -fno-alias -ansi-alias
359.botsspar: -O3 -openmp -ipo -xAVX -fno-alias -ansi-alias
367.imagick: -O2 -openmp -ipo -xAVX -ansi-alias
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:

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Peak Optimization Flags (Continued)

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

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

357.bt331: Same as 351.bwaves

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

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

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

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

371.applu331: -O2 -openmp -ipo -xAVX -fno-alias

The flags file that was used to format this result can be browsed at

<http://www.spec.org/omp2012/flags/Intel-ic13.0-linux64.20130320.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/omp2012/flags/Intel-ic13.0-linux64.20130320.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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