



SPEC® OMPG2012 Result

Copyright 2012-2016 Standard Performance Evaluation Corporation

SGI

SPECompG_peak2012 = 84.2

SGI UV 300 (Intel Xeon E7-8867 v4, 2.40 GHz)

SPECompG_base2012 = 80.1

OMP2012 license:14

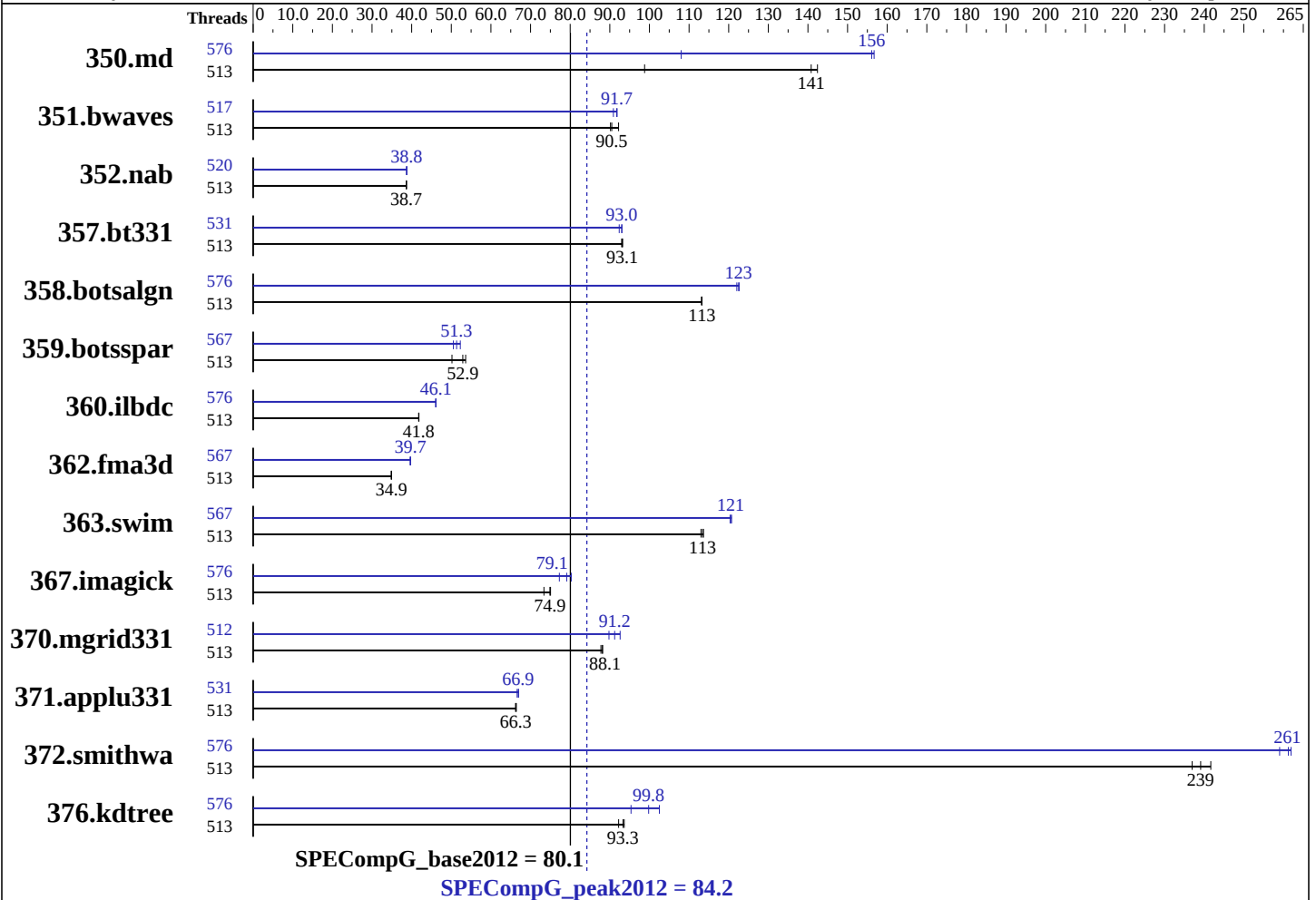
Test sponsor: SGI

Tested by: SGI

Test date: May-2016

Hardware Availability: Jun-2016

Software Availability: Apr-2016



Hardware

CPU Name: Intel Xeon E7-8867 v4
CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz
CPU MHz: 2400
CPU MHz Maximum: 3300
FPU: Integrated
CPU(s) enabled: 576 cores, 32 chips, 18 cores/chip
CPU(s) orderable: 4-32 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: 45 MB I+D on chip per chip
Other Cache: None
Memory: 8 TB (512 x 16 GB 2Rx4 PC4-2133P-R, running at 1600 MHz)
Disk Subsystem: 1 x 400 GB SSD (Intel SSD 3500 Series, SATA II)
Other Hardware: None

Continued on next page

Software

Operating System: SUSE Linux Enterprise Server 12 (x86_64) SP1
Kernel 3.12.57-60.35-default
Compiler: C/C++/Fortran: Version 16.0.1.150 of Intel Composer XE for Linux, Build 20151021
Auto Parallel: No
File System: ext3
System State: Multi-user, run level 3
Base Pointers: 64-bit
Peak Pointers: Not Applicable
Other Software: SGI Accelerate 1.12 (Build 714r28.sles12sp1-1604201900), SGI Foundation Software 2.14 (Build 714r28.sles12sp1-1604201900)



SPEC OMPG2012 Result

Copyright 2012-2016 Standard Performance Evaluation Corporation

SGI

SPECompG_peak2012 = 84.2

SGI UV 300 (Intel Xeon E7-8867 v4, 2.40 GHz)

SPECompG_base2012 = 80.1

OMP2012 license:14

Test sponsor: SGI

Tested by: SGI

Test date: May-2016

Hardware Availability: Jun-2016

Software Availability: Apr-2016

Base Threads Run: 513

Minimum Peak Threads: 512

Maximum Peak Threads: 576

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
350.md	513	<u>32.9</u>	<u>141</u>	46.9	98.8	32.5	142	576	42.9	108	29.5	157	<u>29.7</u>	<u>156</u>
351.bwaves	513	<u>50.1</u>	<u>90.5</u>	50.2	90.2	49.1	92.2	517	49.8	90.9	49.3	91.9	<u>49.4</u>	<u>91.7</u>
352.nab	513	<u>101</u>	<u>38.7</u>	101	38.7	101	38.6	520	101	38.7	100	38.8	<u>100</u>	<u>38.8</u>
357.bt331	513	51.0	93.0	<u>50.9</u>	<u>93.1</u>	50.8	93.3	531	50.9	93.1	<u>51.0</u>	<u>93.0</u>	51.3	92.4
358.botsalgn	513	38.4	113	<u>38.4</u>	<u>113</u>	38.5	113	576	<u>35.5</u>	<u>123</u>	35.5	123	35.6	122
359.botsspar	513	97.9	53.6	<u>99.2</u>	<u>52.9</u>	105	50.2	567	104	50.5	100	52.3	<u>102</u>	<u>51.3</u>
360.ilbdc	513	85.2	41.8	<u>85.2</u>	<u>41.8</u>	85.1	41.8	576	77.2	46.1	77.3	46.1	<u>77.2</u>	<u>46.1</u>
362.fma3d	513	<u>109</u>	<u>34.9</u>	109	34.9	109	34.9	567	95.9	39.6	<u>95.7</u>	<u>39.7</u>	95.7	39.7
363.swim	513	<u>39.9</u>	<u>113</u>	40.1	113	39.9	114	567	37.5	121	37.6	120	<u>37.6</u>	<u>121</u>
367.imagick	513	93.7	75.0	<u>93.9</u>	<u>74.9</u>	95.8	73.4	576	<u>88.8</u>	<u>79.1</u>	91.0	77.3	87.5	80.3
370.mgrid331	513	50.1	88.2	<u>50.2</u>	<u>88.1</u>	50.4	87.8	512	<u>48.5</u>	<u>91.2</u>	47.7	92.6	49.2	89.8
371.applu331	513	91.5	66.2	91.3	66.4	<u>91.4</u>	<u>66.3</u>	531	91.0	66.6	<u>90.6</u>	<u>66.9</u>	90.5	67.0
372.smithwa	513	22.2	242	22.6	237	<u>22.4</u>	<u>239</u>	576	<u>20.5</u>	<u>261</u>	20.7	259	20.5	262
376.kdtree	513	<u>48.2</u>	<u>93.3</u>	48.1	93.6	48.8	92.2	576	47.2	95.4	43.9	103	<u>45.1</u>	<u>99.8</u>

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

Submit Notes

The config file option 'submit' was used.

For all benchmarks threads were bound to cores using the following submit command:

```
dplace -x2 $command
```

This binds threads in order of creation, beginning with the master thread on logical cpu 0, the first slave thread on logical cpu 1, and so on. The -x2 flag instructs dplace to skip placement of the lightweight OpenMP monitor thread, which is created prior to the slave threads.

Operating System Notes

Transparent Hugepages :

Transparent Hugepages are disabled by

```
echo never > /sys/kernel/mm/transparent_hugepage/enabled
```

Software Environment:

```
export KMP_AFFINITY=disabled
```

```
export KMP_STACKSIZE=200M
```

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/

Page 2



SPEC OMPG2012 Result

Copyright 2012-2016 Standard Performance Evaluation Corporation

SGI

SPECompG_peak2012 = 84.2

SGI UV 300 (Intel Xeon E7-8867 v4, 2.40 GHz)

SPECompG_base2012 = 80.1

OMP2012 license:14

Test sponsor: SGI

Tested by: SGI

Test date: May-2016

Hardware Availability: Jun-2016

Software Availability: Apr-2016

Operating System Notes (Continued)

```
export KMP_SCHEDULE=static,balanced
export OMP_DYNAMIC=FALSE
ulimit -s unlimited
```

Platform Notes

Intel Hyperthreading set to Disabled

General Notes

372.smithwa (peak): "redundant" src.alt was used.

372.smithwa (base): "redundant" src.alt was used.

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Base Portability Flags

350.md: -free
367.imagick: -std=c99

Base Optimization Flags

C benchmarks:
-O2 -xCORE-AVX2 -ipo1 -openmp -ansi-alias -mmodel=medium
-shared-intel

C++ benchmarks:
-O2 -xCORE-AVX2 -ipo1 -openmp -ansi-alias -mmodel=medium
-shared-intel

Fortran benchmarks:
-O2 -xCORE-AVX2 -ipo1 -openmp -mmodel=medium -shared-intel



SPEC OMPG2012 Result

Copyright 2012-2016 Standard Performance Evaluation Corporation

SGI

SPECompG_peak2012 = 84.2

SGI UV 300 (Intel Xeon E7-8867 v4, 2.40 GHz)

SPECompG_base2012 = 80.1

OMP2012 license:14

Test sponsor: SGI

Tested by: SGI

Test date: May-2016

Hardware Availability: Jun-2016

Software Availability: Apr-2016

Peak Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Peak Portability Flags

350.md: -free
367.imagick: -std=c99

Peak Optimization Flags

C benchmarks:
-O2 -xCORE-AVX2 -ipo1 -openmp -ansi-alias -mmodel=medium
-shared-intel

C++ benchmarks:
-O2 -xCORE-AVX2 -ipo1 -openmp -ansi-alias -mmodel=medium
-shared-intel

Fortran benchmarks:
-O2 -xCORE-AVX2 -ipo1 -openmp -mmodel=medium -shared-intel

The flags files that were used to format this result can be browsed at

<http://www.spec.org/omp2012/flags/SGI-OMP2012-ic16.html>

<http://www.spec.org/omp2012/flags/SGI-UV300-RevB.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/omp2012/flags/SGI-OMP2012-ic16.xml>

<http://www.spec.org/omp2012/flags/SGI-UV300-RevB.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 Mon Jun 6 10:31:35 2016 by SPEC OMP2012 PS/PDF formatter v541.
Originally published on 6 June 2016.