



SPEC® OMPG2012 Result

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Colfax International

(Test Sponsor: Indiana University)

Intel Xeon Phi 7210, 1.30GHz,
SMT on, Turbo off, MCDRAM Cache

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 8.25

OMP2012 license:3440A

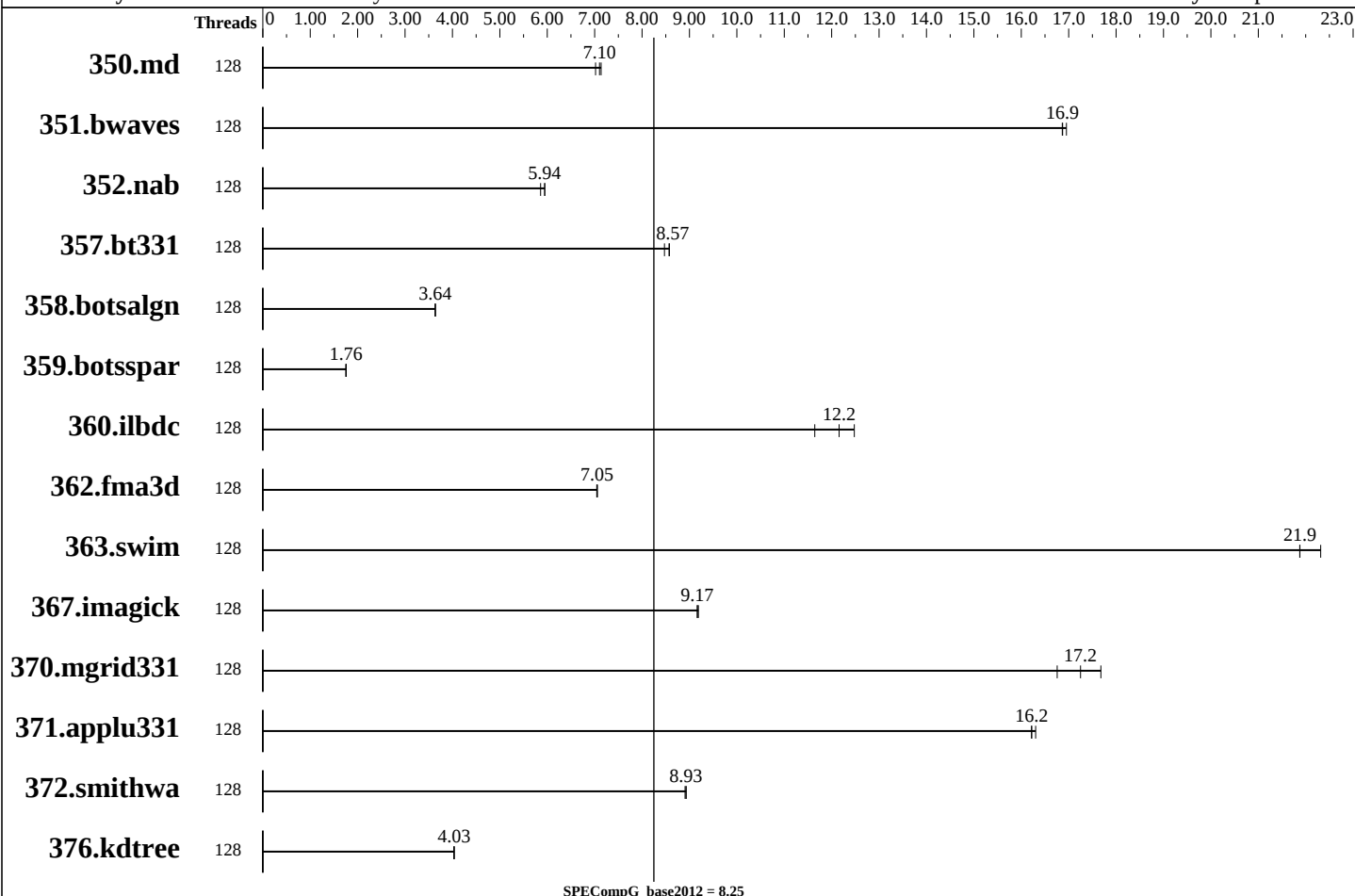
Test sponsor: Indiana University

Tested by: Indiana University

Test date: Oct-2016

Hardware Availability: Aug-2016

Software Availability: Apr-2016



Hardware

CPU Name: Intel Xeon Phi 7210
 CPU Characteristics: Intel Turbo Boost Technology off, Simultaneous Multithreading (SMT) on
 CPU MHz: 1300
 CPU MHz Maximum: 1500
 FPU: Integrated
 CPU(s) enabled: 64 cores, 1 chip, 64 cores/chip, 4 threads/core
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 1 MB I+D on chip per two cores
 L3 Cache: None
 Other Cache: None
 Memory: 96 GB (6 x 16 GB 2Rx8 PC4-2400T-REB-11, ECC)
 Disk Subsystem: Intel S3510 SSD 800GB, SATA3
 Other Hardware: None
 Base Threads Run: 128

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Software

Operating System: CentOS Linux release 7.2.1511
 3.10.0-327.13.1.el7.xppsl_1.3.3.151.x86_64
 Compiler: C/C++/Fortran: Version 16.0.3.210 of Intel Composer XE 2016 for Linux Build 20160415
 Auto Parallel: No
 File System: ext4
 System State: Runlevel 3 (multi-user with networking)
 Base Pointers: 64-bit
 Peak Pointers: Not Applicable
 Other Software: None



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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	Seconds	Ratio
350.md	128	660	7.02	649	7.14	<u>652</u>	<u>7.10</u>									
351.bwaves	128	269	16.9	267	17.0	<u>268</u>	<u>16.9</u>									
352.nab	128	664	5.86	654	5.95	<u>654</u>	<u>5.94</u>									
357.bt331	128	559	8.47	553	8.58	<u>553</u>	<u>8.57</u>									
358.botsalgn	128	<u>1196</u>	<u>3.64</u>	1196	3.64	1196	3.64									
359.botsspar	128	2988	1.76	2995	1.75	<u>2989</u>	<u>1.76</u>									
360.ilbdc	128	285	12.5	<u>293</u>	<u>12.2</u>	306	11.6									
362.fma3d	128	539	7.04	538	7.06	<u>539</u>	<u>7.05</u>									
363.swim	128	<u>207</u>	<u>21.9</u>	207	21.9	203	22.3									
367.imagick	128	767	9.17	<u>767</u>	<u>9.17</u>	765	9.19									
370.mgrid331	128	250	17.7	<u>256</u>	<u>17.2</u>	264	16.8									
371.aplu331	128	372	16.3	374	16.2	<u>374</u>	<u>16.2</u>									
372.smithwa	128	<u>600</u>	<u>8.93</u>	602	8.91	600	8.93									
376.kdtree	128	1114	4.04	1117	4.03	<u>1115</u>	<u>4.03</u>									

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

Platform Notes

Sysinfo program /home/lijunj/SPEC/omp2012-1.1-run/Docs/sysinfo
Revision 563 of 2016-06-10 (097295389cf6073d8c3b03fa376740a5)
running on knl1.uits.indiana.edu Thu Oct 6 00:24:30 2016

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 Phi(TM) CPU 7210 @ 1.30GHz

1 "physical id"s (chips)

256 "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 : 64

siblings : 256

physical 0: cores 0 1 2 3 6 7 10 11 12 13 14 15 18 19 20 21 22 23 24 25 26

27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51

52 53 56 57 58 59 60 61 62 63 64 65 68 69 70 71 72 73

cache size : 1024 KB

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Platform Notes (Continued)

From /proc/meminfo

MemTotal: 98679320 kB

HugePages_Total: 0

Hugepagesize: 2048 kB

/usr/bin/lsb_release -d

CentOS Linux release 7.2.1511 (Core)

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

centos-release: CentOS Linux release 7.2.1511 (Core)

centos-release-upstream: Derived from Red Hat Enterprise Linux 7.2 (Source)

os-release:

NAME="CentOS Linux"

VERSION="7 (Core)"

ID="centos"

ID_LIKE="rhel fedora"

VERSION_ID="7"

PRETTY_NAME="CentOS Linux 7 (Core)"

ANSI_COLOR="0;31"

CPE_NAME="cpe:/o:centos:centos:7"

redhat-release: CentOS Linux release 7.2.1511 (Core)

system-release: CentOS Linux release 7.2.1511 (Core)

system-release-cpe: cpe:/o:centos:centos:7

uname -a:

Linux knl1.uits.indiana.edu 3.10.0-327.13.1.el7.xppsl_1.3.3.151.x86_64 #1 SMP

Fri Jun 10 15:04:35 UTC 2016 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Oct 5 12:52

SPEC is set to: /home/lijunj/SPEC/omp2012-1.1-run

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
------------	------	------	------	-------	------	------------

/dev/sda3	ext4	713G	77G	601G	12%	/
-----------	------	------	-----	------	-----	---

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

(End of data from sysinfo program)

General Notes

BIOS settings:

Intel Simultaneous Multithreading (SMT): on

Intel Turbo Boost Technology (Turbo): off

Cluster Mode: quadrant

Memory Mode: cache



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Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Base Portability Flags

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

Base Optimization Flags

C benchmarks:
-O3 -ansi-alias -no-prec-div -qopenmp -ipo -xMIC-AVX512
-fp-model fast=2

C++ benchmarks:
-O3 -ansi-alias -no-prec-div -qopenmp -ipo -xMIC-AVX512
-fp-model fast=2

Fortran benchmarks:
-O3 -no-prec-div -qopenmp -ipo -xMIC-AVX512 -fp-model fast=2

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

<http://www.spec.org/omp2012/flags/Intel-ic16.0-linux64.html>
<http://www.spec.org/omp2012/flags/knl.html>

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

<http://www.spec.org/omp2012/flags/Intel-ic16.0-linux64.xml>
<http://www.spec.org/omp2012/flags/knl.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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