



SPEC® OMPG2012 Result

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Colfax International

(Test Sponsor: Indiana University)

Intel Xeon Phi 7210, 1.30GHz,
SMT off, Turbo off, flat (MCDRAM Preferred)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 7.19

OMP2012 license:3440A

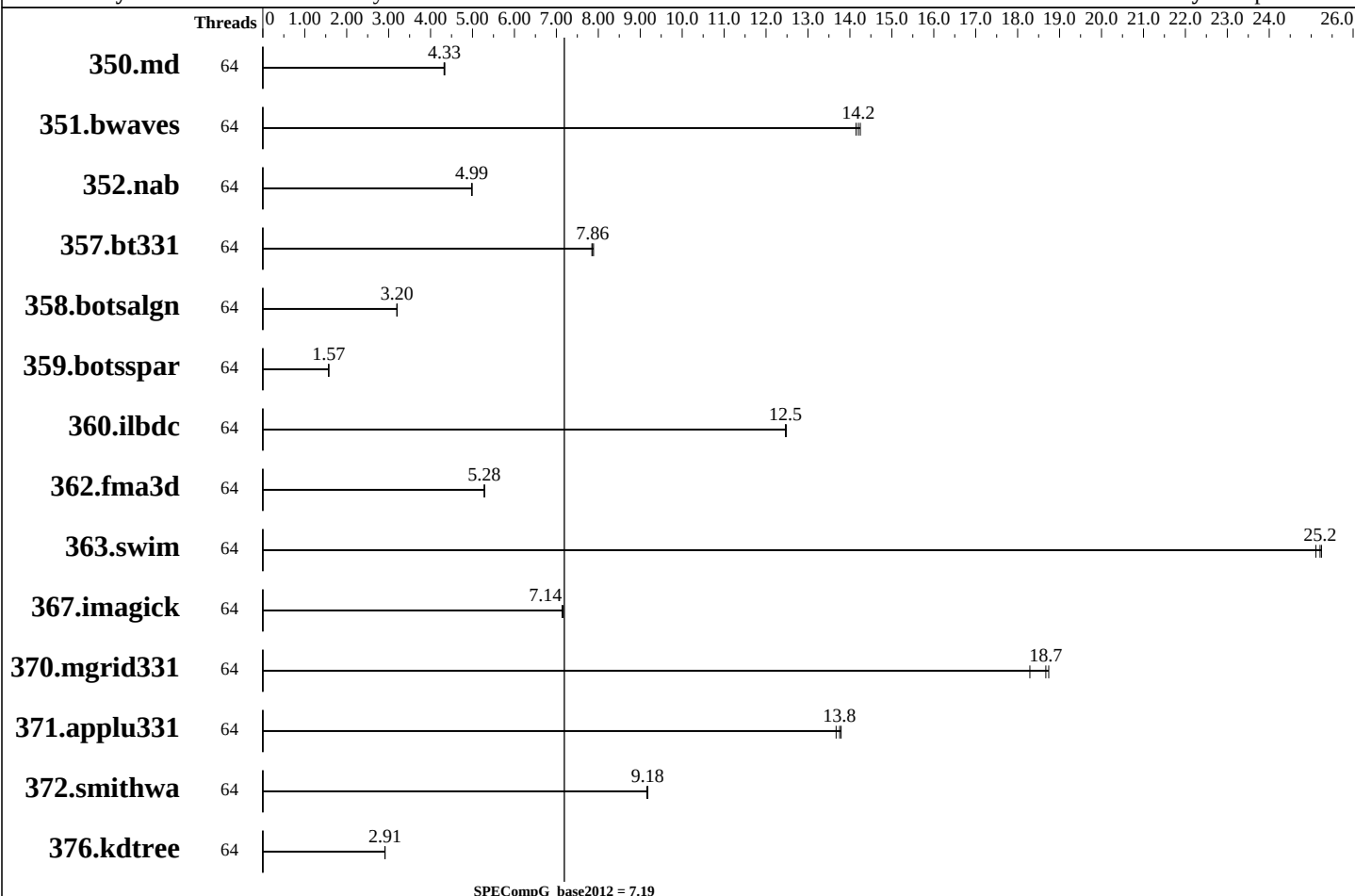
Test sponsor: Indiana University

Tested by: Indiana University

Test date: Aug-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) off
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: 64

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Software

Operating System: CentOS Linux release 7.2.1511
CentOS Linux release 7.2.1511 (Core)
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	64	1071	4.32	<u>1069</u>	<u>4.33</u>	1067	4.34									
351.bwaves	64	318	14.2	<u>319</u>	<u>14.2</u>	320	14.1									
352.nab	64	<u>780</u>	<u>4.99</u>	781	4.98	780	4.99									
357.bt331	64	<u>603</u>	<u>7.86</u>	601	7.89	604	7.85									
358.botsalgn	64	1360	3.20	1359	3.20	<u>1359</u>	<u>3.20</u>									
359.botsspar	64	3338	1.57	3347	1.57	<u>3342</u>	<u>1.57</u>									
360.ilbdc	64	<u>286</u>	<u>12.5</u>	285	12.5	286	12.5									
362.fma3d	64	<u>719</u>	<u>5.28</u>	719	5.28	719	5.28									
363.swim	64	180	25.1	<u>180</u>	<u>25.2</u>	179	25.2									
367.imagick	64	982	7.16	985	7.14	<u>984</u>	<u>7.14</u>									
370.mgrid331	64	242	18.3	236	18.7	<u>237</u>	<u>18.7</u>									
371.applu331	64	<u>441</u>	<u>13.8</u>	439	13.8	443	13.7									
372.smithwa	64	584	9.18	<u>584</u>	<u>9.18</u>	585	9.16									
376.kdtree	64	1544	2.92	<u>1545</u>	<u>2.91</u>	1546	2.91									

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.

submit = numactl -p 1 \$command

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 13 16:12:58 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)

64 "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

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Platform Notes (Continued)

siblings : 64
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

From /proc/meminfo

MemTotal: 115216920 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 13 14:15

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

Filesystem Type Size Used Avail Use% Mounted on

/dev/sda3 ext4 713G 78G 599G 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

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General Notes (Continued)

Memory Mode: flat

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/colfax-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/colfax-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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