



SPEC® OMPG2012 Result

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Colfax International

(Test Sponsor: Indiana University)

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

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 7.16

OMP2012 license:3440A

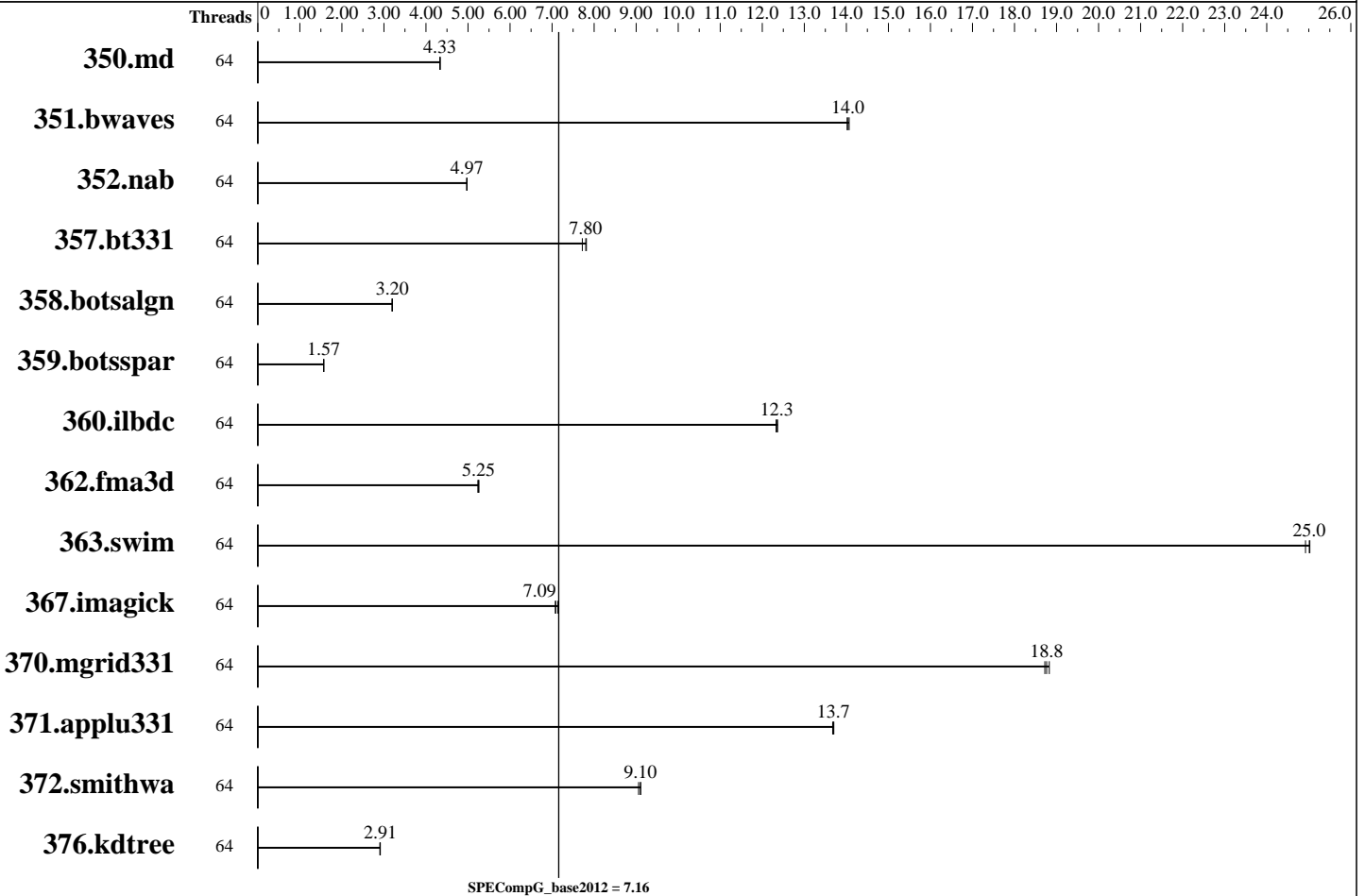
Test sponsor: Indiana University

Tested by: Indiana University

Test date: Dec-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: 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
350.md	64	1068	4.34	<u>1068</u>	<u>4.33</u>	1069	4.33							
351.bwaves	64	<u>323</u>	<u>14.0</u>	322	14.1	323	14.0							
352.nab	64	782	4.97	782	4.97	<u>782</u>	<u>4.97</u>							
357.bt331	64	<u>608</u>	<u>7.80</u>	614	7.72	606	7.82							
358.botsalgn	64	1360	3.20	<u>1361</u>	<u>3.20</u>	1361	3.20							
359.botsspar	64	<u>3348</u>	<u>1.57</u>	3348	1.57	3349	1.57							
360.ilbdc	64	<u>288</u>	<u>12.3</u>	289	12.3	288	12.4							
362.fma3d	64	726	5.23	722	5.26	<u>724</u>	<u>5.25</u>							
363.swim	64	<u>181</u>	<u>25.0</u>	181	25.0	182	24.9							
367.imagick	64	993	7.08	<u>992</u>	<u>7.09</u>	985	7.14							
370.mgrid331	64	236	18.7	<u>236</u>	<u>18.8</u>	235	18.8							
371.applu331	64	<u>443</u>	<u>13.7</u>	443	13.7	442	13.7							
372.smithwa	64	592	9.06	<u>589</u>	<u>9.10</u>	589	9.11							
376.kdtree	64	<u>1545</u>	<u>2.91</u>	1550	2.90	1544	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 kn11.uits.indiana.edu Tue Dec 13 19:41:10 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

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Platform Notes (Continued)

```

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

```

From /proc/meminfo

MemTotal: 115193108 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 kn11.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 Dec 13 14:23

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

```

Filesystem      Type      Size      Used      Avail      Use%      Mounted on
/dev/sda3       ext4      713G      109G      568G      16%      /

```

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: -mmodel=medium
363.swim: -mmodel=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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