



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 = 8.38

OMP2012 license:3440A

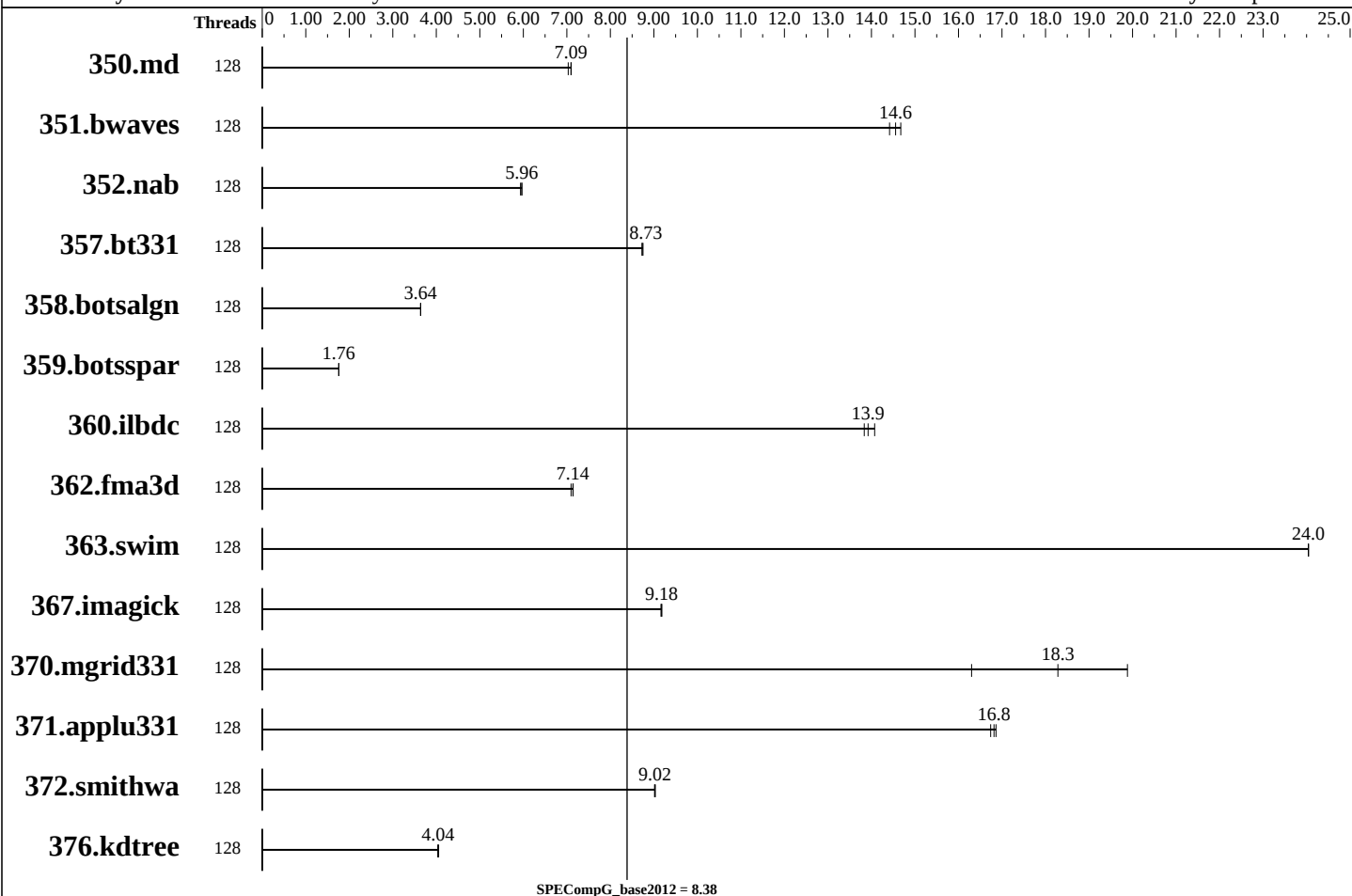
Test sponsor: Indiana University

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: 128

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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	128	658	7.03	653	7.09	652	7.10							
351.bwaves	128	309	14.7	311	14.6	314	14.4							
352.nab	128	655	5.94	652	5.96	652	5.97							
357.bt331	128	543	8.73	543	8.73	542	8.75							
358.botsalgn	128	1195	3.64	1195	3.64	1195	3.64							
359.botsspar	128	2987	1.76	2980	1.76	2983	1.76							
360.ilbdc	128	257	13.8	253	14.1	256	13.9							
362.fma3d	128	532	7.14	535	7.10	532	7.14							
363.swim	128	188	24.0	188	24.0	188	24.0							
367.imagick	128	766	9.18	766	9.18	767	9.16							
370.mgrid331	128	222	19.9	242	18.3	271	16.3							
371.applu331	128	362	16.7	360	16.8	359	16.9							
372.smithwa	128	595	9.02	594	9.02	593	9.03							
376.kdtree	128	1113	4.04	1115	4.04	1110	4.05							

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 Wed Dec 14 06:19:19 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 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 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  17% /

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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