SPEC® OMPG2012 Result

Colfax International

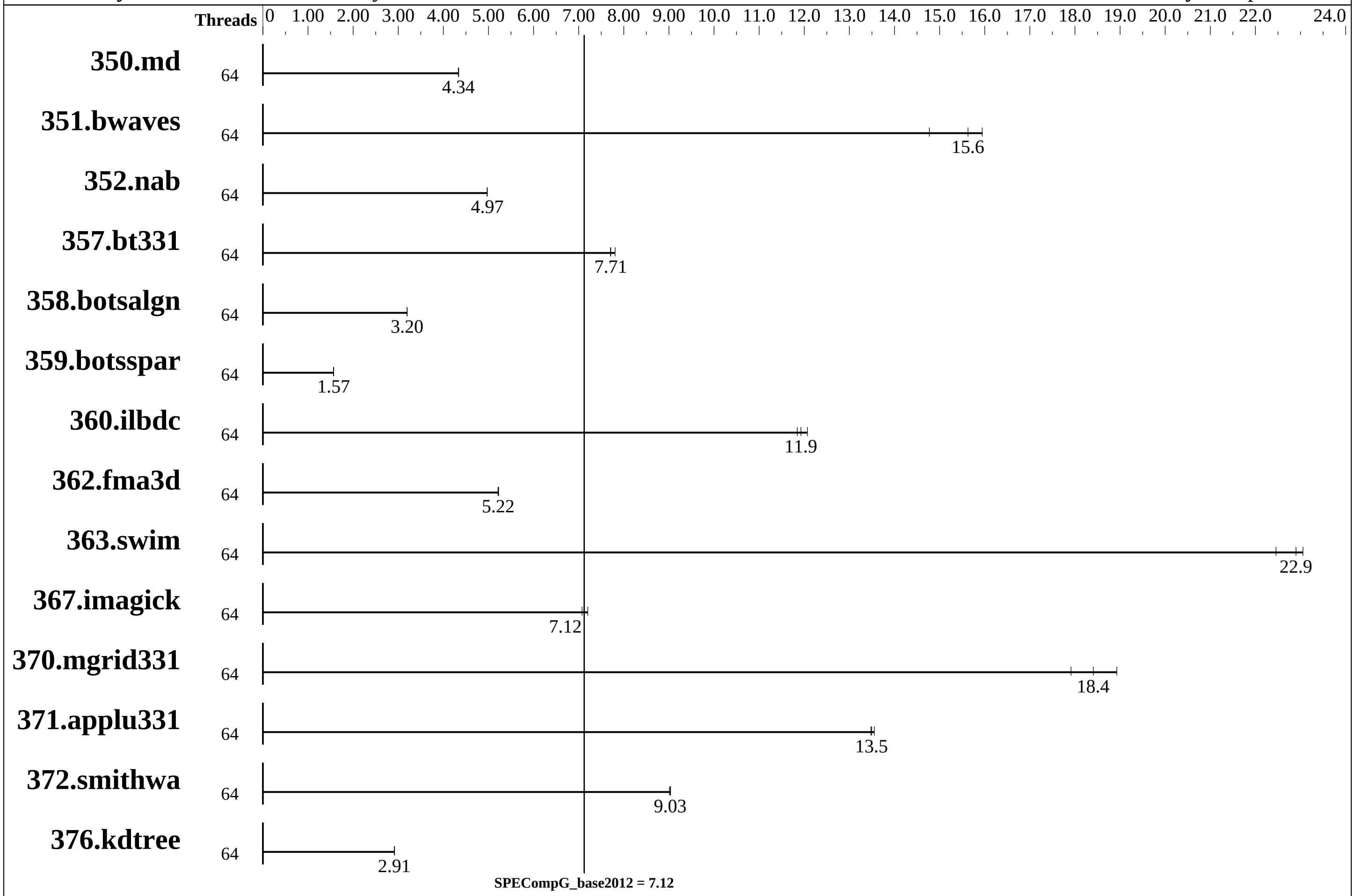
(Test Sponsor: Indiana University)

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

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 7.12

OMP2012 license: 3440A		**Test date:**	Oct-2016
Test sponsor:	Indiana University	**Hardware Availability:**	Aug-2016
Tested by:	Indiana University	**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 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

Minimum Peak Threads: --
Maximum Peak Threads: --

Results Table

	Base							Peak						
Benchmark	**Threads**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Threads**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
350.md	64	1069	4.33	1067	4.34	**1068**	**4.34**							
351.bwaves	64	307	14.8	284	15.9	**290**	**15.6**							
352.nab	64	782	4.97	783	4.97	**782**	**4.97**							
357.bt331	64	607	7.81	**615**	**7.71**	615	7.70							
358.botsalgn	64	1360	3.20	1360	3.20	**1360**	**3.20**							
359.botsspar	64	3345	1.57	**3347**	**1.57**	3352	1.57							
360.ilbdc	64	295	12.1	**299**	**11.9**	301	11.8							
362.fma3d	64	**728**	**5.22**	727	5.23	729	5.21							
363.swim	64	202	22.5	196	23.1	**198**	**22.9**							
367.imagick	64	976	7.20	994	7.07	**988**	**7.12**							
370.mgrid331	64	234	18.9	**240**	**18.4**	247	17.9							
371.applu331	64	447	13.6	**449**	**13.5**	450	13.5							
372.smithwa	64	**594**	**9.03**	593	9.04	595	9.01							
376.kdtree	64	1545	2.91	**1544**	**2.91**	1542	2.92							

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 Wed Oct  5 13:47:22 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
```

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

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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