



SPEC® OMPG2012 Result

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IBM

(Test Sponsor: Indiana University)

IBM S822LC for HPC
(Power8 with NVLink, 2.860 GHz)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 6.06

OMP2012 license:3440A

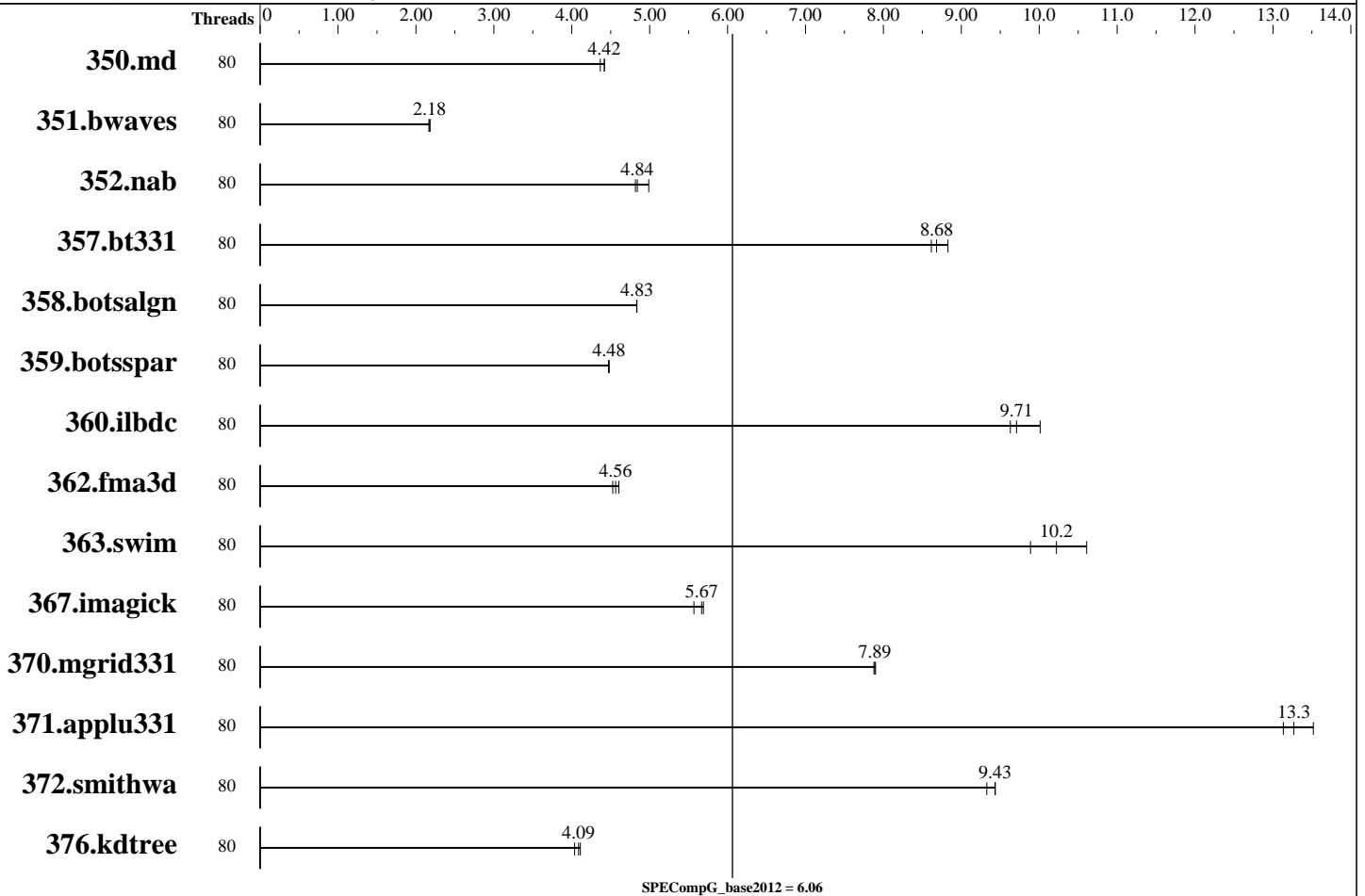
Test sponsor: Indiana University

Tested by: Indiana University

Test date: Apr-2018

Hardware Availability: Sep-2017

Software Availability: Dec-2017



Hardware

CPU Name: POWER8 with NVLink
 CPU Characteristics: IBM Intelligent Energy Optimization enabled, up to 3.492 GHz
 CPU MHz: 2860
 CPU MHz Maximum: 3492
 FPU: Integrated
 CPU(s) enabled: 20 cores, 2 chips, 10 cores/chip, 8 threads/core
 CPU(s) orderable: 1-2 chips
 Primary Cache: 32 KB I + 64 KB D on chip per core
 Secondary Cache: 512 KB I+D on chip per core
 L3 Cache: 8 MB I+D on chip per core
 Other Cache: 16 MB I+D off chip per 4 DIMMs
 Memory: 256 GB (32 x 8 GB DIMMs DDR4 1600 MHz)
 Disk Subsystem: 609TB GPFS
 Other Hardware: None
 Base Threads Run: 80

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Software

Operating System: CentOS Linux release 7.4.1708 (AltArch)
 3.10.0-693.11.1.el7.ppc64le
 Compiler: C/C++: Version 4.0.1 of Clang
 Fortran: Version 4.0.1 of Flang
 Auto Parallel: No
 File System: GPFS 4.2.3.6
 System State: Run level 3 (multi-user)
 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	80	1048	4.42	<u>1048</u>	<u>4.42</u>	1060	4.37							
351.bwaves	80	2077	2.18	<u>2081</u>	<u>2.18</u>	2091	2.17							
352.nab	80	780	4.99	808	4.82	<u>803</u>	<u>4.84</u>							
357.bt331	80	537	8.83	<u>546</u>	<u>8.68</u>	550	8.62							
358.botsalgn	80	899	4.84	<u>900</u>	<u>4.83</u>	900	4.83							
359.botsspar	80	1172	4.48	1174	4.47	<u>1173</u>	<u>4.48</u>							
360.ilbdc	80	356	10.0	370	9.63	<u>367</u>	<u>9.71</u>							
362.fma3d	80	825	4.60	<u>833</u>	<u>4.56</u>	840	4.53							
363.swim	80	427	10.6	<u>443</u>	<u>10.2</u>	458	9.89							
367.imagick	80	1235	5.69	<u>1241</u>	<u>5.67</u>	1262	5.57							
370.mgrid331	80	560	7.90	<u>560</u>	<u>7.89</u>	561	7.88							
371.applu331	80	461	13.1	448	13.5	<u>457</u>	<u>13.3</u>							
372.smithwa	80	<u>568</u>	<u>9.43</u>	575	9.33	568	9.44							
376.kdtree	80	1115	4.04	1095	4.11	<u>1101</u>	<u>4.09</u>							

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

Platform Notes

Sysinfo program /gpfs/homeb/padc/padc021/spec/omp2012-1.1-run/Docs/sysinfo
Revision 563 of 2016-06-10 (097295389cf6073d8c3b03fa376740a5)
running on juroncl3.juron.dns.zone Tue Apr 24 04:07:10 2018

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
clock : 4023.000000MHz
machine : PowerNV 8335-GTB
model : 8335-GTB
platform : PowerNV
revision : 1.0 (pvr 004c 0100)
cpu : POWER8NVL (raw), altivec supported
```

```
*
* 0 "physical id" tags found. Perhaps this is an older system,
* or a virtualized system. Not attempting to guess how to
* count chips/cores for this system.
*
```

160 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The

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Platform Notes (Continued)

following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

From /proc/meminfo

MemTotal: 267801664 kB

HugePages_Total: 0

Hugepagesize: 16384 kB

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

centos-release: CentOS Linux release 7.4.1708 (AltArch)

centos-release-upstream: Derived from Red Hat Enterprise Linux 7.4 (Source)

os-release:

NAME="CentOS Linux"

VERSION="7 (AltArch)"

ID="centos"

ID_LIKE="rhel fedora"

VERSION_ID="7"

PRETTY_NAME="CentOS Linux 7 (AltArch)"

ANSI_COLOR="0;31"

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

redhat-release: CentOS Linux release 7.4.1708 (AltArch)

system-release: CentOS Linux release 7.4.1708 (AltArch)

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

uname -a:

Linux juroncl3.juron.dns.zone 3.10.0-693.11.1.el7.ppc64le #1 SMP Mon Dec 4 15:48:14 GMT 2017 ppc64le ppc64le ppc64le GNU/Linux

run-level 3 Apr 10 19:42

SPEC is set to: /gpfs/homeb/padc/padc021/spec/omp2012-1.1-run

Filesystem Type Size Used Avail Use% Mounted on

homeb gpfs 609T 499T 110T 82% /gpfs/homeb

(End of data from sysinfo program)

General Notes

Environment Variables:

OMP_STACKSIZE=1G

ulimit -s unlimited

Base Compiler Invocation

C benchmarks:

clang

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Standard Performance Evaluation Corporation

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http://www.spec.org/



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Base Compiler Invocation (Continued)

C++ benchmarks:
clang++

Fortran benchmarks:
flang

Base Portability Flags

350.md: -Mfreeform
357.bt331: -mmodel=medium

Base Optimization Flags

C benchmarks:
-Ofast -fopenmp -fsigned-char

C++ benchmarks:
-Ofast -fopenmp

Fortran benchmarks:
-Ofast -fopenmp

The flags file that was used to format this result can be browsed at

<http://www.spec.org/omp2012/flags/11vm40.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/omp2012/flags/11vm40.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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