



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 = 7.49

OMP2012 license:3440A

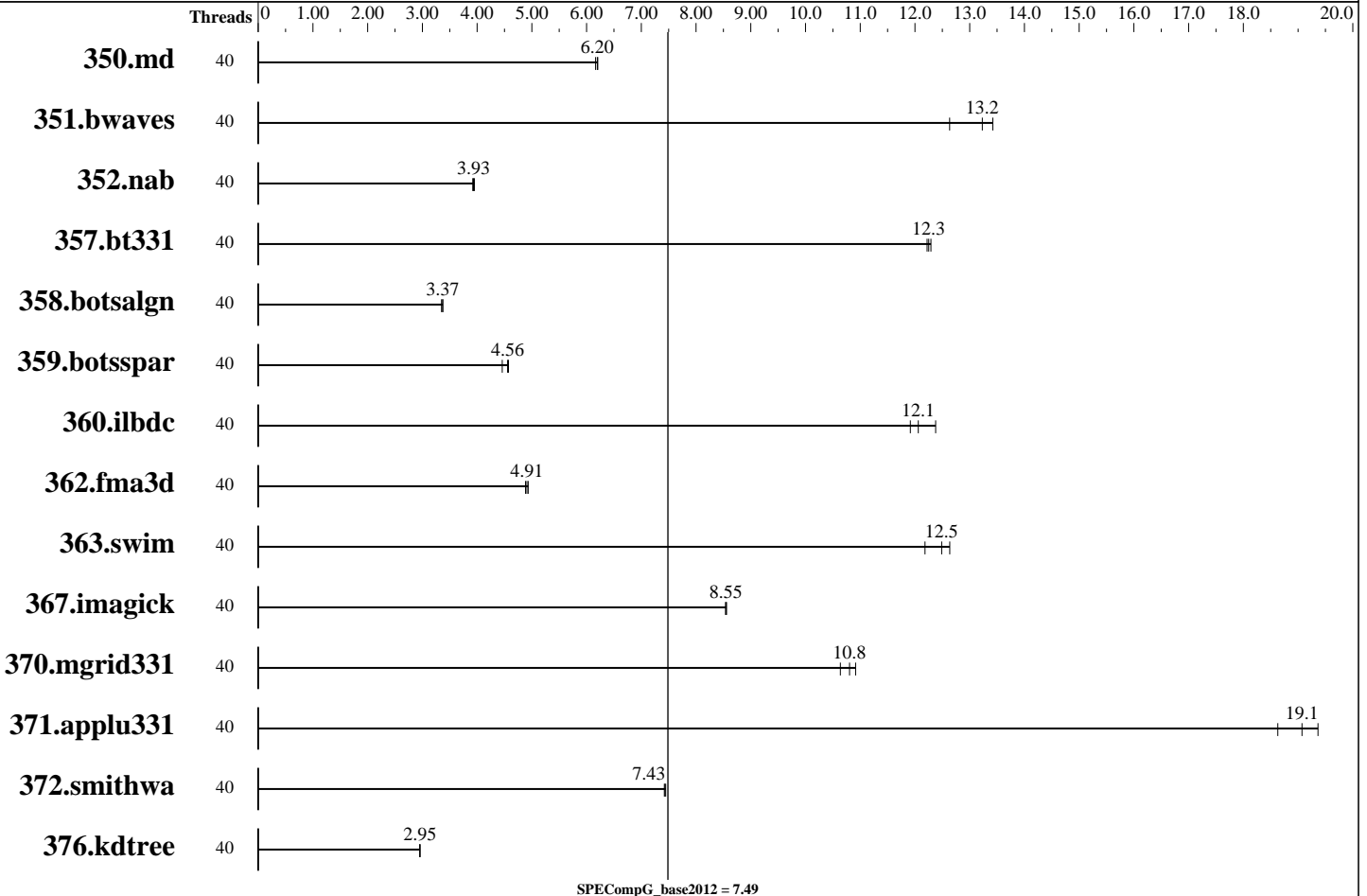
Test sponsor: Indiana University

Tested by: Indiana University

Test date: Apr-2018

Hardware Availability: Sep-2017

Software Availability: Oct-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: 40

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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++/Fortran: Version 17.10 of PGI Community Edition
 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	40	746	6.20	<u>747</u>	<u>6.20</u>	751	6.16							
351.bwaves	40	359	12.6	<u>342</u>	<u>13.2</u>	337	13.4							
352.nab	40	992	3.92	985	3.95	<u>989</u>	<u>3.93</u>							
357.bt331	40	386	12.3	<u>387</u>	<u>12.3</u>	388	12.2							
358.botsalgn	40	<u>1290</u>	<u>3.37</u>	1299	3.35	1290	3.37							
359.botsspar	40	1148	4.57	1177	4.46	<u>1152</u>	<u>4.56</u>							
360.ilbdc	40	288	12.4	299	11.9	<u>295</u>	<u>12.1</u>							
362.fma3d	40	<u>774</u>	<u>4.91</u>	778	4.88	770	4.93							
363.swim	40	<u>363</u>	<u>12.5</u>	359	12.6	372	12.2							
367.imagick	40	823	8.54	821	8.56	<u>823</u>	<u>8.55</u>							
370.mgrid331	40	416	10.6	405	10.9	<u>409</u>	<u>10.8</u>							
371.applu331	40	<u>318</u>	<u>19.1</u>	325	18.6	313	19.4							
372.smithwa	40	<u>721</u>	<u>7.43</u>	720	7.45	722	7.42							
376.kdtree	40	1522	2.96	1525	2.95	<u>1523</u>	<u>2.95</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 juroncl17.juron.dns.zone Sun Apr 22 10:32:46 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 juroncl7.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 19:41

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

Filesystem Type Size Used Avail Use% Mounted on

homeb gpfs 609T 497T 112T 82% /gpfs/homeb

(End of data from sysinfo program)

General Notes

Environment:

Base Compiler Invocation

C benchmarks:

pgcc

C++ benchmarks:

pgc++

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Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/



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Base Compiler Invocation (Continued)

Fortran benchmarks:
pgf90

Base Portability Flags

350.md: -Mfree
357.bt331: -mcmmodel=medium
363.swim: -mcmmodel=medium

Base Optimization Flags

C benchmarks:
-fast -Mfprelaxed -mp -Mschar

C++ benchmarks:
-fast -Mfprelaxed -mp

Fortran benchmarks:
-fast -Mfprelaxed -mp

The flags file that was used to format this result can be browsed at
http://www.spec.org/omp2012/flags/pgi17_linux_flags.20180620.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/omp2012/flags/pgi17_linux_flags.20180620.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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