



SPEC® OMPG2012 Result

Copyright 2012-2018 Standard Performance Evaluation Corporation

IBM

(Test Sponsor: Indiana University)

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

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 5.80

OMP2012 license:3440A

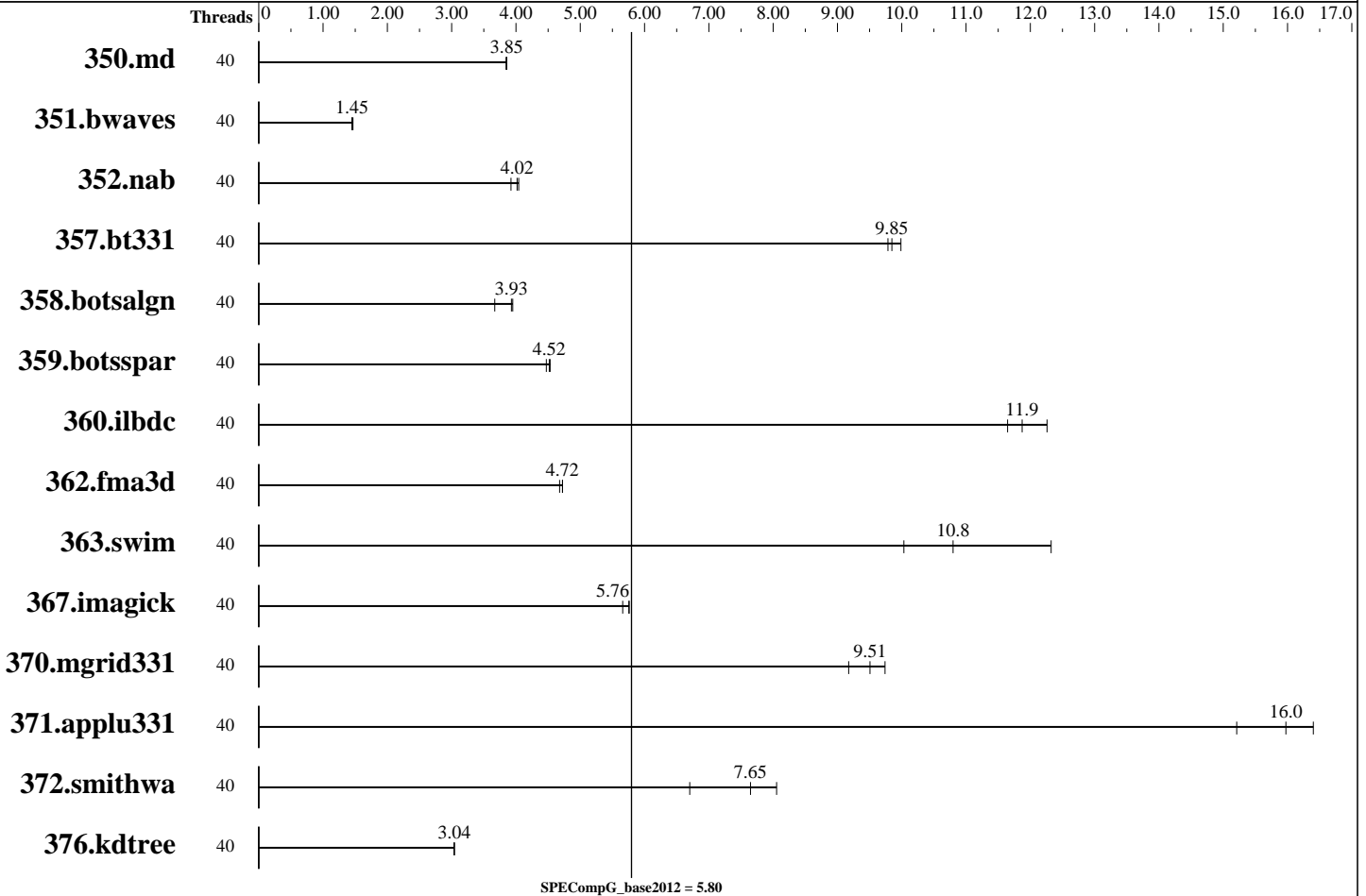
Test sponsor: Indiana University

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: 40

Continued on next page

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



SPEC OMPG2012 Result

Copyright 2012-2018 Standard Performance Evaluation Corporation

IBM

(Test Sponsor: Indiana University)

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

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 5.80

OMP2012 license:3440A

Test sponsor: Indiana University

Tested by: Indiana University

Test date: Apr-2018

Hardware Availability: Sep-2017

Software Availability: Dec-2017

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	1204	3.85	1201	3.86	<u>1201</u>	<u>3.85</u>							
351.bwaves	40	3092	1.47	3127	1.45	<u>3118</u>	<u>1.45</u>							
352.nab	40	962	4.04	<u>968</u>	<u>4.02</u>	992	3.92							
357.bt331	40	484	9.79	<u>481</u>	<u>9.85</u>	475	9.99							
358.botsalgn	40	1185	3.67	<u>1107</u>	<u>3.93</u>	1101	3.95							
359.botsspar	40	<u>1162</u>	<u>4.52</u>	1159	4.53	1174	4.47							
360.ilbdc	40	290	12.3	<u>300</u>	<u>11.9</u>	306	11.6							
362.fma3d	40	804	4.72	812	4.68	<u>804</u>	<u>4.72</u>							
363.swim	40	368	12.3	<u>420</u>	<u>10.8</u>	452	10.0							
367.imagick	40	1242	5.66	1220	5.76	<u>1221</u>	<u>5.76</u>							
370.mgrid331	40	454	9.74	<u>465</u>	<u>9.51</u>	482	9.17							
371.applu331	40	<u>379</u>	<u>16.0</u>	398	15.2	369	16.4							
372.smithwa	40	800	6.70	<u>701</u>	<u>7.65</u>	666	8.05							
376.kdtree	40	1479	3.04	1481	3.04	<u>1480</u>	<u>3.04</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 14:20:55 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

Continued on next page



SPEC OMPG2012 Result

Copyright 2012-2018 Standard Performance Evaluation Corporation

IBM

(Test Sponsor: Indiana University)

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

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 5.80

OMP2012 license:3440A

Test sponsor: Indiana University

Tested by: Indiana University

Test date: Apr-2018

Hardware Availability: Sep-2017

Software Availability: Dec-2017

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

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/

Page 3



SPEC OMPG2012 Result

Copyright 2012-2018 Standard Performance Evaluation Corporation

IBM

(Test Sponsor: Indiana University)

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

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 5.80

OMP2012 license:3440A

Test sponsor: Indiana University

Tested by: Indiana University

Test date: Apr-2018

Hardware Availability: Sep-2017

Software Availability: Dec-2017

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>

SPEC is a registered trademark of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC OMP2012 v1.1.
Report generated on Wed Jun 20 15:26:26 2018 by SPEC OMP2012 PS/PDF formatter v541.
Originally published on 20 June 2018.