



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 = 5.56

OMP2012 license:3440A

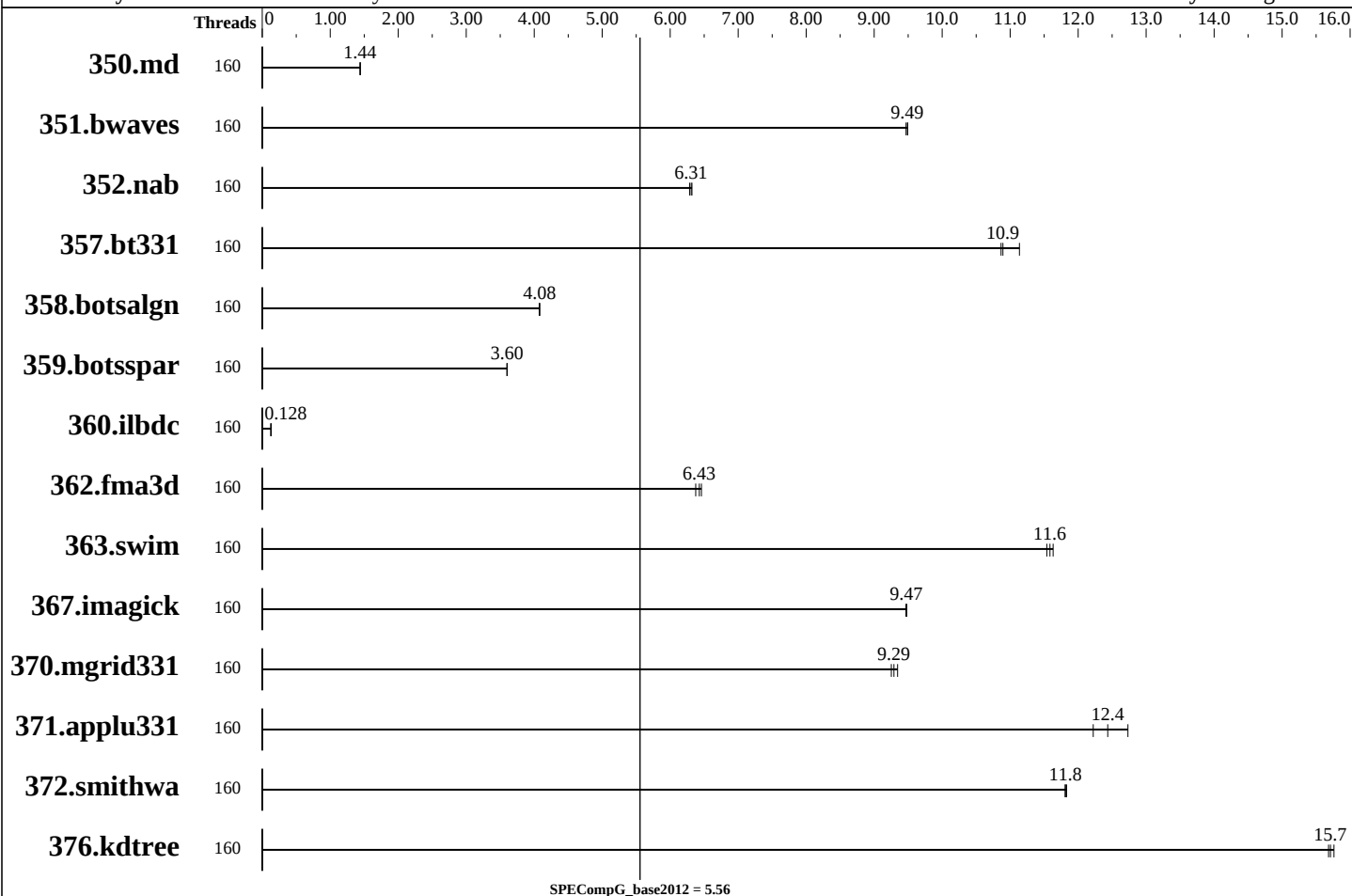
Test sponsor: Indiana University

Tested by: Indiana University

Test date: Jan-2018

Hardware Availability: Sep-2017

Software Availability: Aug-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: 160

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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 7.2.0 of gcc
Auto Parallel: No
File System: GPFS 4.2.3.6
System State: Run level 5 (Multi-user, graphical)
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	160	3214	1.44	3215	1.44	<u>3214</u>	<u>1.44</u>							
351.bwaves	160	<u>477</u>	<u>9.49</u>	478	9.47	477	9.49							
352.nab	160	619	6.28	<u>617</u>	<u>6.31</u>	616	6.32							
357.bt331	160	426	11.1	<u>435</u>	<u>10.9</u>	436	10.9							
358.botsalgn	160	1067	4.08	1066	4.08	<u>1067</u>	<u>4.08</u>							
359.botsspar	160	<u>1458</u>	<u>3.60</u>	1459	3.60	1457	3.60							
360.ilbdc	160	27801	0.128	<u>27795</u>	<u>0.128</u>	27792	0.128							
362.fma3d	160	588	6.46	596	6.38	<u>591</u>	<u>6.43</u>							
363.swim	160	<u>391</u>	<u>11.6</u>	389	11.6	393	11.5							
367.imagick	160	742	9.48	743	9.47	<u>742</u>	<u>9.47</u>							
370.mgrid331	160	478	9.25	<u>476</u>	<u>9.29</u>	473	9.34							
371.applu331	160	476	12.7	<u>487</u>	<u>12.4</u>	496	12.2							
372.smithwa	160	<u>454</u>	<u>11.8</u>	454	11.8	453	11.8							
376.kdtree	160	287	15.7	285	15.8	<u>286</u>	<u>15.7</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 juronc13.juron.dns.zone Fri Jan 19 08:31:34 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 juronc13.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 5 Dec 15 13:41

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

Filesystem Type Size Used Avail Use% Mounted on

homeb gpfs 609T 578T 31T 95% /gpfs/homeb

(End of data from sysinfo program)

General Notes

Environment Variables:

OMP_STACKSIZE=1G

ulimit -s unlimited

No: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

No: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.

No: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.

This benchmark result is intended to provide perspective on

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General Notes (Continued)

past performance using the historical hardware and/or software described on this result page.

The system as described on this result page was formerly generally available. At the time of this publication, it may not be shipping, and/or may not be supported, and/or may fail to meet other tests of General Availability described in the SPEC HPG Policy document, <http://www.spec.org/hpg/policy.html>

This measured result may not be representative of the result that would be measured were this benchmark run with hardware and software available as of the publication date.

Base Compiler Invocation

C benchmarks:

gcc

C++ benchmarks:

g++

Fortran benchmarks:

gfortran

Base Portability Flags

350.md: -ffree-form -fno-range-check

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/gcc-linux64.20180620.html>



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

<http://www.spec.org/omp2012/flags/gcc-linux64.20180620.xml>

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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 15:26:13 2018 by SPEC OMP2012 PS/PDF formatter v541.
Originally published on 20 June 2018.