



SPEC® OMPG2012 Result

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NEC

(Test Sponsor: RWTH University Aachen)

SPECompG_peak2012 = Not Run

NEC HPC 1812Rg

SPECompG_base2012 = 5.23

OMP2012 license:055A

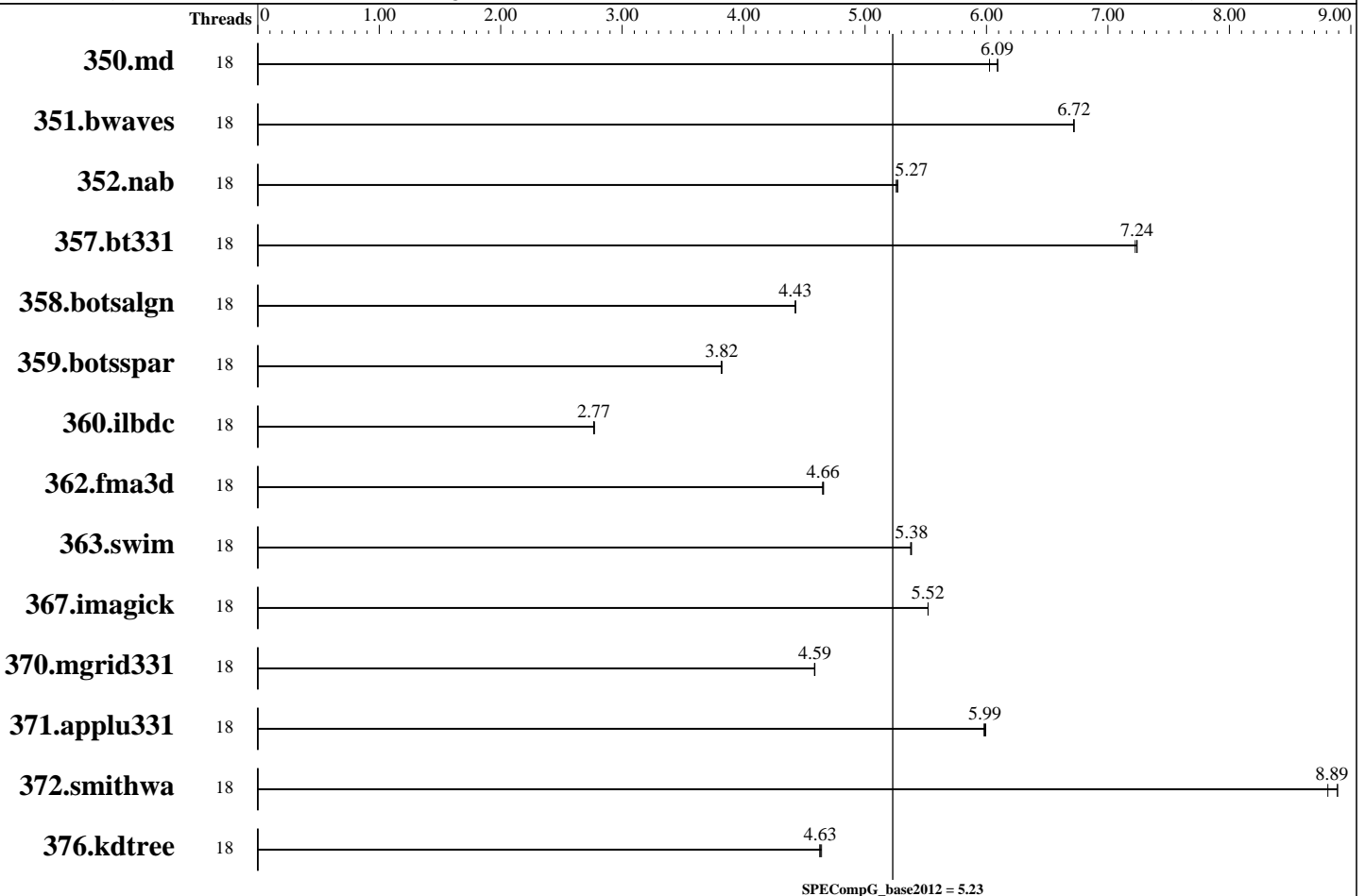
Test sponsor: RWTH University Aachen

Tested by: Jennifer Witham, Bo Wang

Test date: Sep-2017

Hardware Availability: Oct-2016

Software Availability: Feb-2016



Hardware

CPU Name: Intel Xeon E7-8860 v4
 CPU Characteristics: Intel Turbo Boost Technology up to 3.2 GHz (single)/2.2 GHz (all), 9.6 GT/s QPI, Hyper-Threading enabled
 CPU MHz: 2200
 CPU MHz Maximum: 3200
 FPU: Integrated
 CPU(s) enabled: 144 cores, 8 chips, 18 cores/chip, 2 threads/core
 CPU(s) orderable: 4,8 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 45 MB I+D on chip per chip
 Other Cache: None
 Memory: 1 TB (64x16 GB 2Rx4 PC4-2400T-R)
 Disk Subsystem: SATA, Samsung SM863, 2x1.92TB, NVMe SSD
 Other Hardware: None

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Software

Operating System: CentOS Linux release 7.3.1611 (Core) 3.10.0-514.26.2.el7.x86_64
 Compiler: C/C++/Fortran: Version 16.0.2.181 of Intel Parallel Studio XE
 Auto Parallel: No
 File System: NFS
 System State: Multi-User
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 Other Software: None



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Base Threads Run: 18

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	18	760	6.09	768	6.02	760	6.09							
351.bwaves	18	674	6.72	674	6.72	674	6.72							
352.nab	18	740	5.26	739	5.27	738	5.27							
357.bt331	18	656	7.22	655	7.24	655	7.24							
358.botsalgn	18	983	4.43	983	4.43	983	4.43							
359.botsspar	18	1375	3.82	1376	3.82	1374	3.82							
360.ilbdc	18	1287	2.77	1284	2.77	1287	2.77							
362.fma3d	18	817	4.65	816	4.66	816	4.66							
363.swim	18	842	5.38	842	5.38	843	5.38							
367.imagick	18	1274	5.52	1274	5.52	1274	5.52							
370.mgrid331	18	964	4.58	964	4.59	964	4.59							
371.applu331	18	1013	5.98	1012	5.99	1011	5.99							
372.smithwa	18	603	8.89	608	8.81	603	8.89							
376.kdtree	18	969	4.64	972	4.63	973	4.63							

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

Platform Notes

Sysinfo program /rwthfs/rz/cluster/home/jw331215/work/claixspec/Docs/sysinfo
Revision 563 of 2016-06-10 (097295389cf6073d8c3b03fa376740a5)
running on lns01.hpc.itc.rwth-aachen.de Mon Sep 25 12:04:11 2017

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(R) CPU E7-8860 v4 @ 2.20GHz
 8 "physical id"s (chips)
288 "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 : 18
siblings : 36
physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 1: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 2: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 3: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
```

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Platform Notes (Continued)

```

physical 4: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 5: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 6: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 7: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
cache size : 46080 KB

```

From /proc/meminfo

MemTotal: 1056480792 kB

HugePages_Total: 0

Hugepagesize: 2048 kB

/usr/bin/lsb_release -d

CentOS Linux release 7.3.1611 (Core)

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

centos-release: CentOS Linux release 7.3.1611 (Core)

centos-release-upstream: Derived from Red Hat Enterprise Linux 7.3 (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 7.3.1611 (Core)

system-release: CentOS Linux release 7.3.1611 (Core)

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

uname -a:

Linux lns01.hpc.itc.rwth-aachen.de 3.10.0-514.26.2.el7.x86_64 #1 SMP Tue Jul 4 15:04:05 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Sep 19 16:48

SPEC is set to: /rwthfs/rz/cluster/home/jw331215/work/claixspec

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
134.61.192.202:/home/jw331215	nfs	150G	66G	85G	44%	
/rwthfs/rz/cluster/home/jw331215						

Additional information from dmidecode:

Warning: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

(End of data from sysinfo program)



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General Notes

BIOS settings:

Intel Hyper-Threading Technology (SMT): Enabled

Intel Turbo Boost Technology (Turbo) : Enabled

ENV_OMP_SCHEDULE=static

ENV_KMP_BLOCKTIME=200

ENV_KMP_STACKSIZE=8192M

ENV_OMP_DYNAMIC=FALSE

Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Base Portability Flags

350.md: -free

357.bt331: -mmodel=medium

363.swin: -mmodel=medium

367.imagick: -std=c99

Base Optimization Flags

C benchmarks:

-O3 -openmp -ipo -xCORE-AVX2 -ansi-alias

C++ benchmarks:

-O3 -openmp -ipo -xCORE-AVX2 -ansi-alias

Fortran benchmarks:

-O3 -openmp -ipo -xCORE-AVX2 -align all

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

<http://www.spec.org/omp2012/flags/Intel-linux64.html>

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

<http://www.spec.org/omp2012/flags/Intel-linux64.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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