SPEC® OMPG2012 Result

Copyright 2012-2017 Standard Performance Evaluation Corporation

NEC

(Test Sponsor: RWTH University Aachen)

NEC HPC 1812Rg

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 5.23

OMP2012 license: 055A

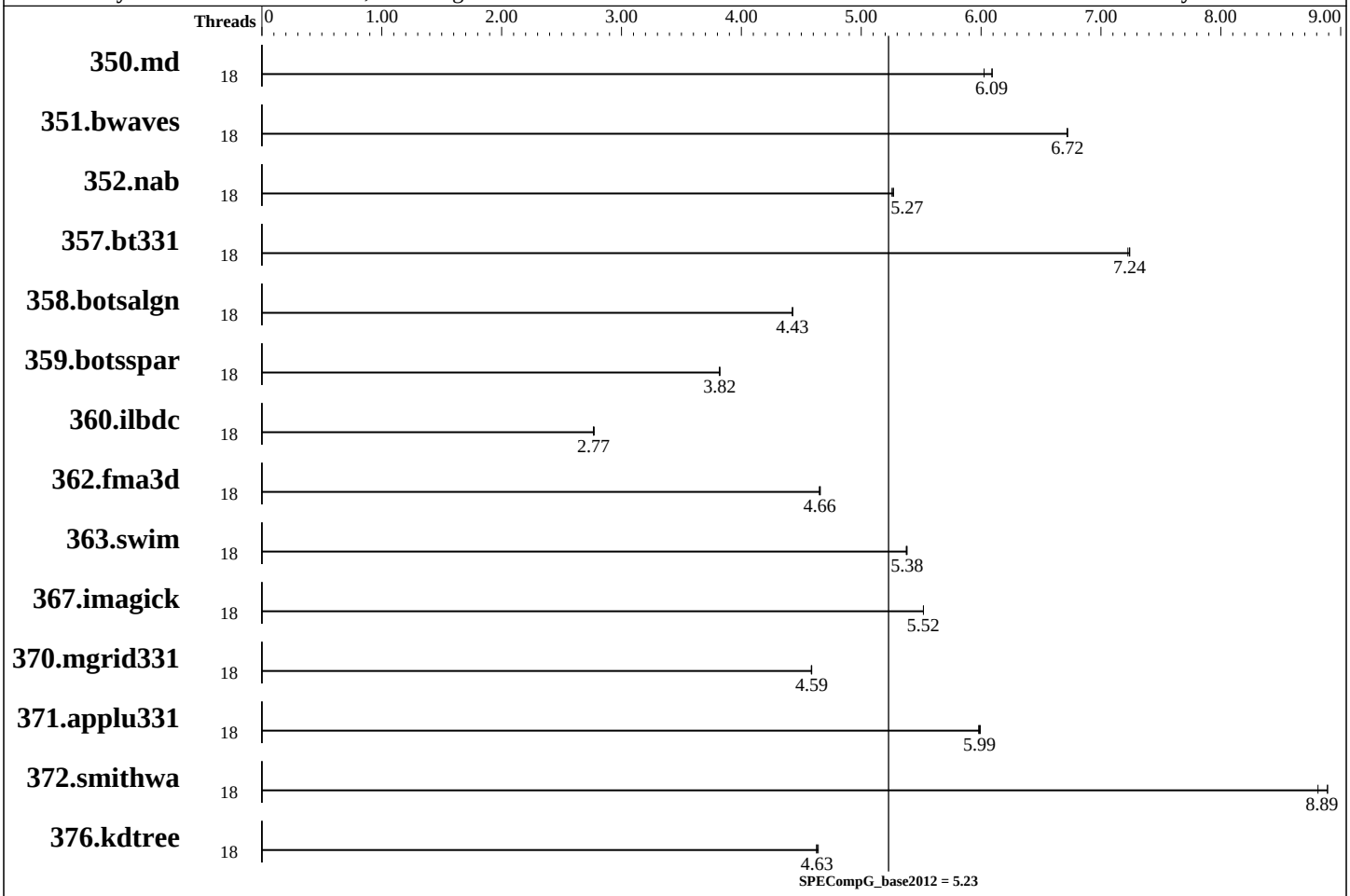
Test sponsor: RWTH University Aachen

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

Continued on next page

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

SPEC OMPG2012 Result

Copyright 2012-2017 Standard Performance Evaluation Corporation

NEC
(Test Sponsor: RWTH University Aachen)

NEC HPC 1812Rg

SPECompG_peak2012 = Not Run

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

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
```

Continued on next page

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)
```

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: `-mcmodel=medium`
363.swim: `-mcmodel=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`

Copyright 2012-2017 Standard Performance Evaluation Corporation

NEC
(Test Sponsor: RWTH University Aachen)

NEC HPC 1812Rg

SPECompG_peak2012 = Not Run

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

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 Oct 25 17:17:21 2017 by SPEC OMP2012 PS/PDF formatter v541.
Originally published on 25 October 2017.