



# SPEC® OMPG2012 Result

Copyright 2012-2017 Standard Performance Evaluation Corporation

NEC

(Test Sponsor: RWTH University Aachen)

SPECompG\_peak2012 = Not Run

## NEC HPC 1812Rg

SPECompG\_base2012 = 19.5

OMP2012 license:055A

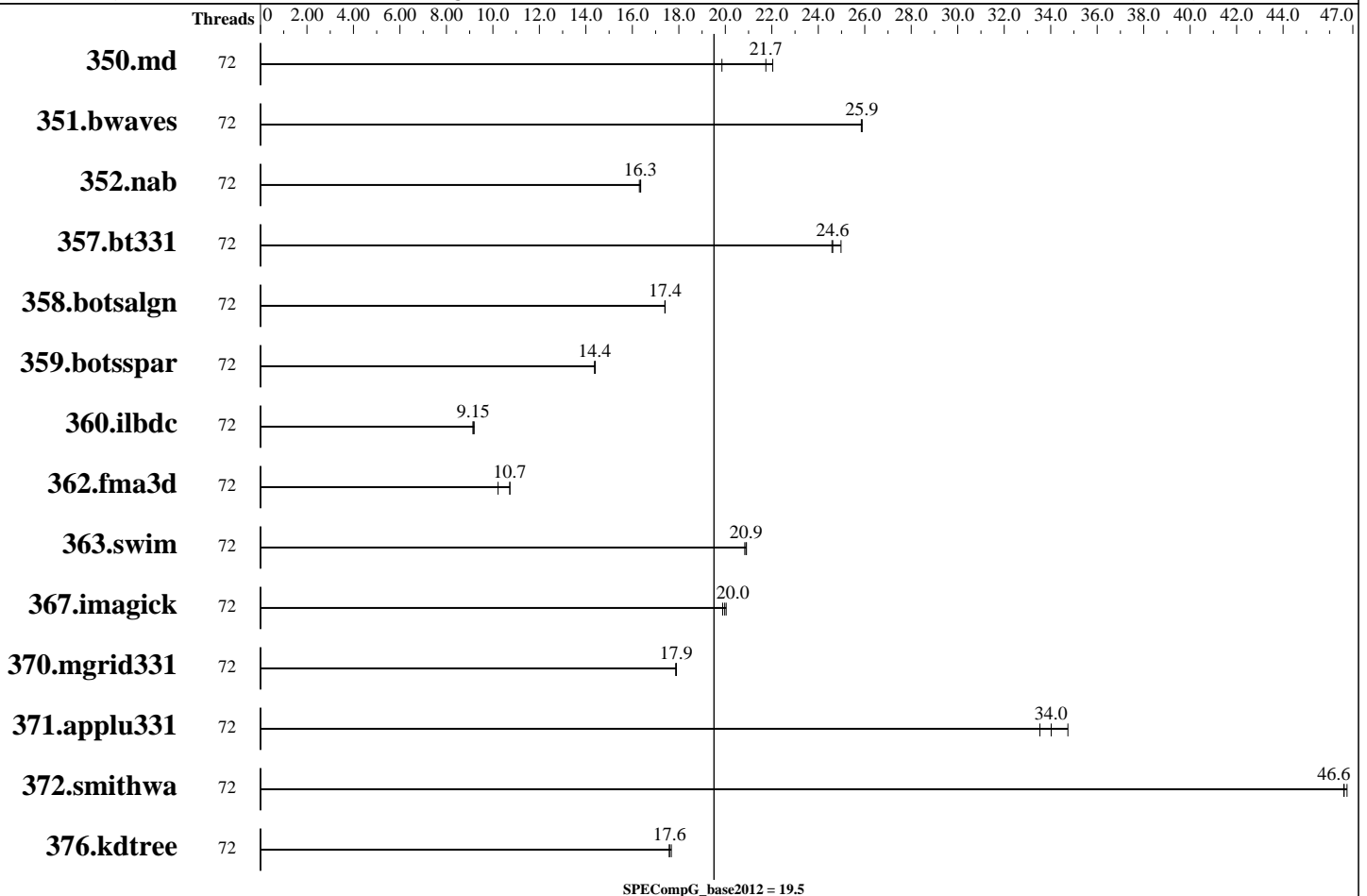
Test sponsor: RWTH University Aachen

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 = 19.5

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: 72  
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	72	210	22.0	233	19.9	<u>213</u>	<u>21.7</u>									
351.bwaves	72	175	25.9	<u>175</u>	<u>25.9</u>	175	25.9									
352.nab	72	239	16.3	238	16.4	<u>238</u>	<u>16.3</u>									
357.bt331	72	<u>193</u>	<u>24.6</u>	193	24.6	190	25.0									
358.botsalgn	72	250	17.4	250	17.4	<u>250</u>	<u>17.4</u>									
359.botsspar	72	365	14.4	364	14.4	<u>365</u>	<u>14.4</u>									
360.ilbdc	72	389	9.15	<u>389</u>	<u>9.15</u>	387	9.19									
362.fma3d	72	354	10.7	<u>354</u>	<u>10.7</u>	372	10.2									
363.swim	72	<u>217</u>	<u>20.9</u>	217	20.8	217	20.9									
367.imagick	72	354	19.9	351	20.0	<u>352</u>	<u>20.0</u>									
370.mgrid331	72	247	17.9	<u>247</u>	<u>17.9</u>	247	17.9									
371.applu331	72	<u>178</u>	<u>34.0</u>	174	34.7	181	33.5									
372.smithwa	72	115	46.6	115	46.7	<u>115</u>	<u>46.6</u>									
376.kdtree	72	255	17.7	<u>256</u>	<u>17.6</u>	256	17.6									

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 lns02.hpc.itc.rwth-aachen.de Wed Sep 13 13:58:09 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



# SPEC OMPG2012 Result

Copyright 2012-2017 Standard Performance Evaluation Corporation

NEC

(Test Sponsor: RWTH University Aachen)

SPECompG\_peak2012 = Not Run

## NEC HPC 1812Rg

SPECompG\_base2012 = 19.5

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

### 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:      1056480804 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 lns02.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 Aug 7 20:25

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

Filesystem	Mounted on	Type	Size	Used	Avail	Use%
isi.isi.hpc.itc.rwth-aachen.de:/home/jw331215	/rwthfs/rz/cluster/home/jw331215	nfs	150G	65G	86G	43%

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)



# 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 = 19.5

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

## 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>



# 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 = 19.5

**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](mailto:webmaster@spec.org).

Tested with SPEC OMP2012 v1.1.  
Report generated on Wed Oct 25 17:17:14 2017 by SPEC OMP2012 PS/PDF formatter v541.  
Originally published on 25 October 2017.