



SPEC® OMPG2012 Result

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Supermicro

(Test Sponsor: Technische Universitaet Dresden)

Supermicro SYS-4048B-TR4FT (Intel Xeon E7-4850 v3 @ 2.20 GHz)

SPECompG_peak2012 = 14.7

SPECompG_base2012 = 14.2

OMP2012 license:37A

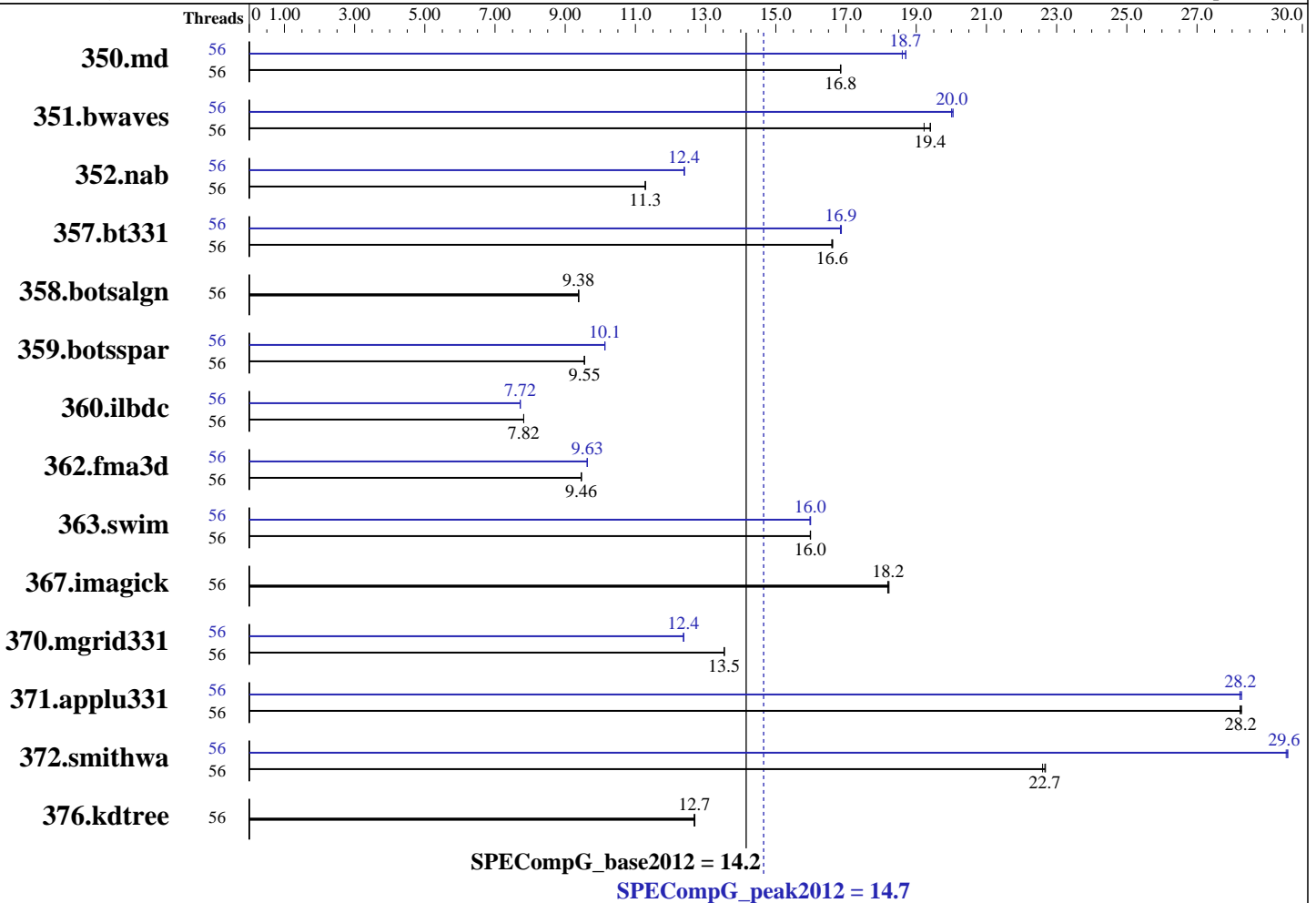
Test sponsor: Technische Universitaet Dresden

Tested by: Technische Universitaet Dresden

Test date: Sep-2017

Hardware Availability: Jul-2015

Software Availability: Sep-2017



Hardware

CPU Name: Intel Xeon E7-4850 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 2.8 GHz
 Intel HyperThreading: Disabled
 CPU MHz: 2200
 CPU MHz Maximum: 2800
 FPU: Integrated
 CPU(s) enabled: 56 cores, 4 chips, 14 cores/chip
 CPU(s) orderable: 1,2,3,4 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: 35 MB I+D on chip per chip
 Other Cache: None
 Memory: 2 TB (64 x 32 GB 4Rx4 PC4-2133P-L, running at 1333 MHz)
 Disk Subsystem: 256 GB Micron SSD 1100
 Other Hardware: None

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Software

Operating System: Red Hat Enterprise Linux Server release 6.9 (Santiago)
 Kernel 2.6.32-696.3.1.el6.Bull.118.x86_64
 Compiler: C/C++/Fortran: Version 18.0.0.128 of Intel Composer Build 20170811
 Auto Parallel: No
 File System: ext3
 System State: Default
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 Other Software: None



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Base Threads Run: 56
Minimum Peak Threads: 56
Maximum Peak Threads: 56

Results Table

Benchmark	Base								Peak							
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
350.md	56	275	16.8	275	16.9	275	16.8	56	249	18.6	248	18.7	248	18.7		
351.bwaves	56	233	19.4	234	19.4	236	19.2	56	226	20.0	226	20.0	226	20.1		
352.nab	56	345	11.3	345	11.3	345	11.3	56	314	12.4	314	12.4	314	12.4		
357.bt331	56	285	16.6	285	16.6	286	16.6	56	281	16.9	281	16.9	281	16.8		
358.botsalgn	56	464	9.38	464	9.38	464	9.38	56	464	9.38	464	9.38	464	9.38		
359.botsspar	56	550	9.55	550	9.55	550	9.55	56	518	10.1	518	10.1	518	10.1		
360.ilbdc	56	455	7.82	455	7.82	455	7.82	56	461	7.72	461	7.72	461	7.72		
362.fma3d	56	402	9.46	402	9.46	402	9.46	56	395	9.63	395	9.63	394	9.63		
363.swim	56	283	16.0	283	16.0	283	16.0	56	283	16.0	284	16.0	283	16.0		
367.imagick	56	386	18.2	387	18.2	386	18.2	56	386	18.2	387	18.2	386	18.2		
370.mgrid331	56	327	13.5	327	13.5	327	13.5	56	357	12.4	357	12.4	357	12.4		
371.applu331	56	215	28.2	214	28.3	215	28.2	56	215	28.2	214	28.3	215	28.2		
372.smithwa	56	236	22.7	236	22.7	237	22.6	56	181	29.6	181	29.5	181	29.6		
376.kdtree	56	354	12.7	355	12.7	355	12.7	56	354	12.7	355	12.7	355	12.7		

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

Platform Notes

Sysinfo program /tmp/spec/1.1/Docs/sysinfo
Revision 563 of 2016-06-10 (097295389cf6073d8c3b03fa376740a5)
running on taurussmp7 Wed Sep 13 06:47:42 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 E7-4850 v3 @ 2.20GHz
 4 "physical id"s (chips)
 56 "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 : 14
siblings : 14
physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 2: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 3: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
```

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Platform Notes (Continued)

cache size : 35840 KB

From /proc/meminfo

MemTotal: 2117575728 kB

HugePages_Total: 0

Hugepagesize: 2048 kB

/usr/bin/lsb_release -d

Red Hat Enterprise Linux Server release 6.9 (Santiago)

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

redhat-release: Red Hat Enterprise Linux Server release 6.9 (Santiago)

system-release: Red Hat Enterprise Linux Server release 6.9 (Santiago)

system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:

Linux taurussmp7 2.6.32-696.3.1.el6.Bull.118.x86_64 #1 SMP Thu Jun 15 17:05:40 CEST 2017 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jun 27 16:11

SPEC is set to: /tmp/spec/1.1

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda4	ext4	99G	1.7G	92G	2%	/tmp

Cannot run dmidecode; consider saying 'chmod +s /usr/sbin/dmidecode'

(End of data from sysinfo program)

General Notes

System settings:

HyperThreading: disabled

Environment variables:

ENV_KMP_AFFINITY=compact,0

ENV_KMP_LIBRARY=turnaround

ENV_KMP_BLOCKTIME=infinite

ENV_KMP_STACKSIZE=190M

ENV_OMP_DYNAMIC=FALSE

ENV_OMP_NESTED=FALSE

Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

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Base Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Base Portability Flags

350.md: -FR
357.bt331: -mmodel=medium
363.swim: -mmodel=medium
367.imagick: -std=c99

Base Optimization Flags

C benchmarks:
-O2 -openmp -ipo -xCORE-AVX2 -ansi-alias

C++ benchmarks:
-O2 -openmp -ipo -xCORE-AVX2 -ansi-alias

Fortran benchmarks:
-O2 -openmp -ipo -xCORE-AVX2 -align array64byte

Peak Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Peak Portability Flags

350.md: -FR
357.bt331: -mmodel=medium
363.swim: -mmodel=medium
367.imagick: -std=c99



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Peak Optimization Flags

C benchmarks:

352.nab: -O3 -openmp -ipo -xCORE-AVX2 -fno-alias
-opt-malloc-options=1 -opt-calloc -fp-model fast=2
-no-prec-div -no-prec-sqrt -ansi-alias

358.botsalgn: basepeak = yes

359.botsspar: -O3 -openmp -ipo -xCORE-AVX2 -fno-alias -ansi-alias

367.imagick: basepeak = yes

372.smithwa: -O2 -openmp -ipo -xSSE4.2 -fno-alias
-opt-streaming-stores always -opt-malloc-options=1
-ansi-alias

C++ benchmarks:

376.kdtree: basepeak = yes

Fortran benchmarks:

350.md: -O2 -openmp -ipo -xCORE-AVX2 -fno-alias
-opt-malloc-options=1 -fp-model fast=2 -no-prec-div
-no-prec-sqrt -align array64byte

351.bwaves: -O3 -openmp -ipo -xAVX -fno-alias -fp-model fast=2
-no-prec-div -no-prec-sqrt -align array64byte

357.bt331: -O3 -openmp -ipo -xCORE-AVX2 -fno-alias -fp-model fast=2
-no-prec-div -no-prec-sqrt -align array64byte

360.ilbdc: -O3 -openmp -ipo -xAVX -align array64byte

362.fma3d: -O3 -openmp -ipo -xAVX -fno-alias -align array64byte

363.swim: -O2 -openmp -ipo -xAVX -fno-alias -align array64byte

370.mgrid331: -O2 -openmp -ipo -xSSE4.2 -fno-alias -opt-malloc-options=3
-align array64byte

371.applu331: -O2 -openmp -ipo -xAVX -align array64byte

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

<http://www.spec.org/omp2012/flags/icc2018-openmp.html>

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

<http://www.spec.org/omp2012/flags/icc2018-openmp.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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