SPEC® OMPG2012 Result

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IBM
(Test Sponsor: Indiana University)

$SPECompG\_peak2012 =$ Not Run

IBM NeXtScale nx360 M4 server

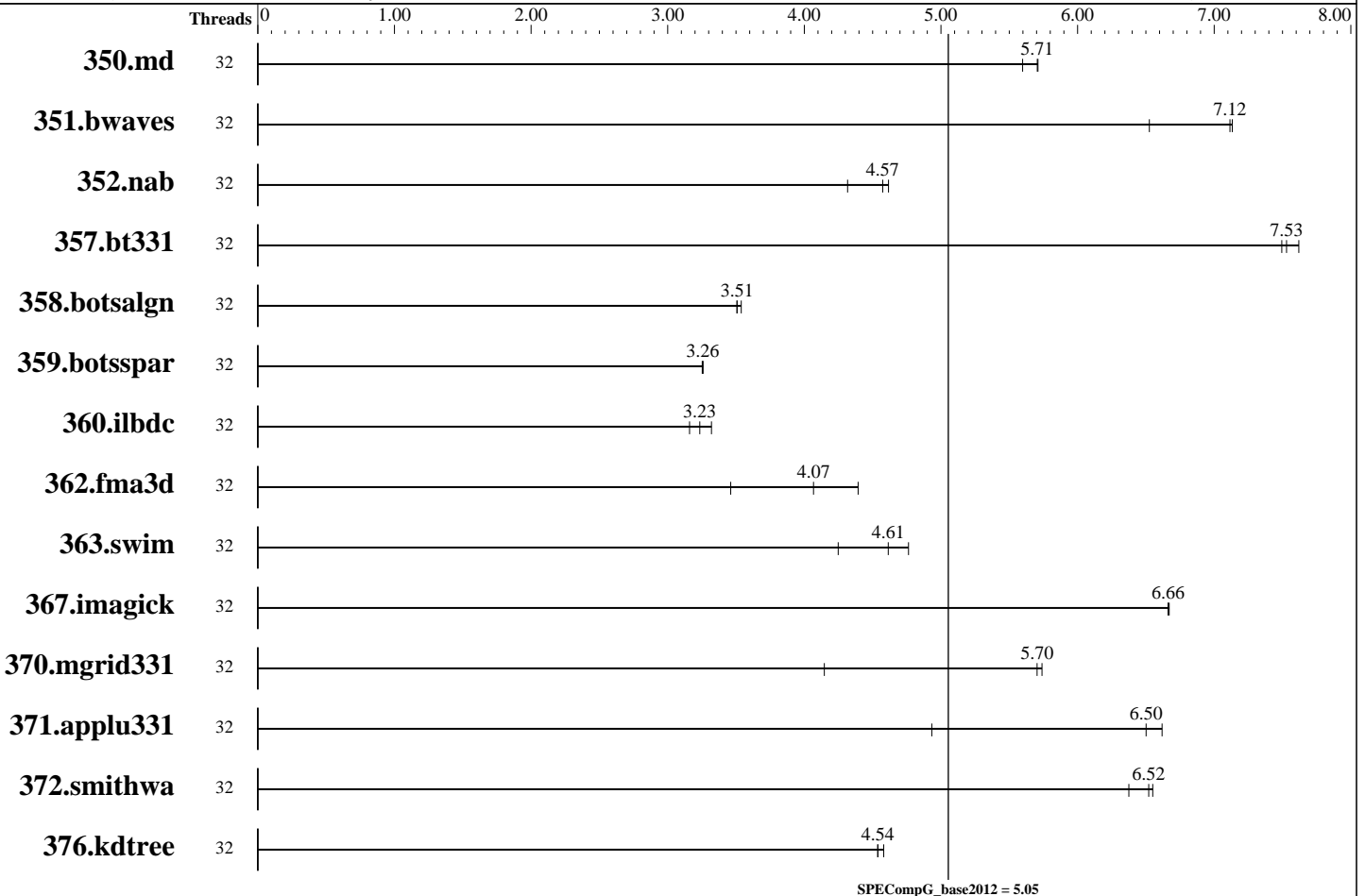$SPECompG\_base2012 =$ 5.05

OMP2012 license: 3440A

Test sponsor: Indiana University

Tested by: Indiana University

Test date: Mar-2015

Hardware Availability: Aug-2014

Software Availability: Jan-2015

Benchmark	Threads	Result
350.md	32	5.71
351.bwaves	32	7.12
352.nab	32	4.57
357.bt331	32	7.53
358.botsalgn	32	3.51
359.botsspar	32	3.26
360.ilbdc	32	3.23
362.fma3d	32	4.07
363.swim	32	4.61
367.imagick	32	6.66
370.mgrid331	32	5.70
371.applu331	32	6.50
372.smithwa	32	6.52
376.kdtree	32	4.54

SPECompG_base2012 = 5.05

Hardware

CPU Name:	Intel Xeon E5-2650 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 3.4GHz, Hyper-Threading on
CPU MHz:	2600
CPU MHz Maximum:	3400
FPU:	Integrated
CPU(s) enabled:	16 cores, 2 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable:	1-2 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:	20 MB I+D on chip per chip, 20 MB shared / 8 cores
Other Cache:	None
Memory:	32 GB (8 x 4 GB 1Rx4 PC3-14900R-13, ECC)
Disk Subsystem:	250 GB 7200 RPM 2.5" SAS hard drives
Other Hardware:	None
Base Threads Run:	32

Continued on next page

Software

Operating System:	Red Hat Enterprise Linux Server release 6.6 (Santiago) Kernel 2.6.32-504.3.3.el6.x86_64 2.6.32-504.3.3.el6.x86_64
Compiler:	C/C++/Fortran: Version 15.0.1.133 of Intel Composer XE for Linux Build 20141023
Auto Parallel:	No
File System:	NFSv3 (IBM N5500 NAS) over 10 Gb ethernet
System State:	Multi-user, run level 3
Base Pointers:	64-bit
Peak Pointers:	Not Applicable
Other Software:	None

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Minimum Peak Threads: --
Maximum Peak Threads: --

Results Table

Benchmark	Threads	Base Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Peak Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
350.md	32	811	5.71	827	5.60	**812**	**5.71**							
351.bwaves	32	**637**	**7.12**	694	6.53	635	7.13							
352.nab	32	901	4.32	**850**	**4.57**	843	4.62							
357.bt331	32	632	7.49	**630**	**7.53**	622	7.62							
358.botsalgn	32	**1240**	**3.51**	1240	3.51	1229	3.54							
359.botsspar	32	1614	3.25	1611	3.26	**1612**	**3.26**							
360.ilbdc	32	**1100**	**3.23**	1072	3.32	1127	3.16							
362.fma3d	32	1098	3.46	**934**	**4.07**	865	4.39							
363.swim	32	951	4.76	1066	4.25	**982**	**4.61**							
367.imagick	32	**1055**	**6.66**	1054	6.67	1055	6.66							
370.mgrid331	32	770	5.74	**775**	**5.70**	1066	4.15							
371.applu331	32	916	6.62	1228	4.93	**932**	**6.50**							
372.smithwa	32	841	6.38	**822**	**6.52**	818	6.55							
376.kdtree	32	**992**	**4.54**	982	4.58	992	4.54							

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

Platform Notes

```
Sysinfo program /N/soft/mason/omp2012-1.0/SPEC_OMP2012v1.0_karst/Docs/sysinfo
$Rev: 395 $ $Date:: 2012-07-25 #$ 8f8c0fe9e19c658963a1e67685e50647
running on c162.karst.uits.iu.edu Sat Mar 21 18:43:15 2015

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 E5-2650 v2 @ 2.60GHz
      2 "physical id"s (chips)
      32 "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 : 8
      siblings  : 16
      physical 0: cores 0 1 2 3 4 5 6 7
      physical 1: cores 0 1 2 3 4 5 6 7
   cache size : 20480 KB

From /proc/meminfo
```

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Platform Notes (Continued)

```
    MemTotal:        32980520 kB
    HugePages_Total:        0
    Hugepagesize:        2048 kB

 From /etc/*release* /etc/*version*
    redhat-release: Red Hat Enterprise Linux Server release 6.6 (Santiago)
    system-release: Red Hat Enterprise Linux Server release 6.6 (Santiago)
    system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

 uname -a:
    Linux c162.karst.uits.iu.edu 2.6.32-504.3.3.el6.x86_64 #1 SMP Fri Dec 12
    16:05:43 EST 2014 x86_64 x86_64 x86_64 GNU/Linux

 run-level Sep 18 15:32

 SPEC is set to: /N/soft/mason/omp2012-1.0/SPEC_OMP2012v1.0_karst
    Filesystem            Type  Size  Used Avail Use% Mounted on
    researchfs.iu.edu:/gs/hps/soft
                         nfs   599T  101T  498T  17% /N/soft

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

 (End of data from sysinfo program)
```

General Notes

```
    Environment:
```

Base Compiler Invocation

C benchmarks:
```
    icc
```

C++ benchmarks:
```
    icpc
```

Fortran benchmarks:
```
    ifort
```

Base Portability Flags

```
    350.md: -free
 367.imagick: -std=c99
```

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Base Optimization Flags

C benchmarks:
    -O3 -ansi-alias -no-prec-div -openmp -mcmodel=medium -ipo
    -xCORE-AVX-I

C++ benchmarks:
    -O3 -ansi-alias -no-prec-div -openmp -mcmodel=medium -ipo
    -xCORE-AVX-I

Fortran benchmarks:
    -O3 -no-prec-div -openmp -mcmodel=medium -ipo -xCORE-AVX-I

The flags file that was used to format this result can be browsed at
http://www.spec.org/omp2012/flags/Intel-ic13.0-linux64.20150415.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/omp2012/flags/Intel-ic13.0-linux64.20150415.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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