SPEC® OMPG2012 Result

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IBM
(Test Sponsor: Indiana University)

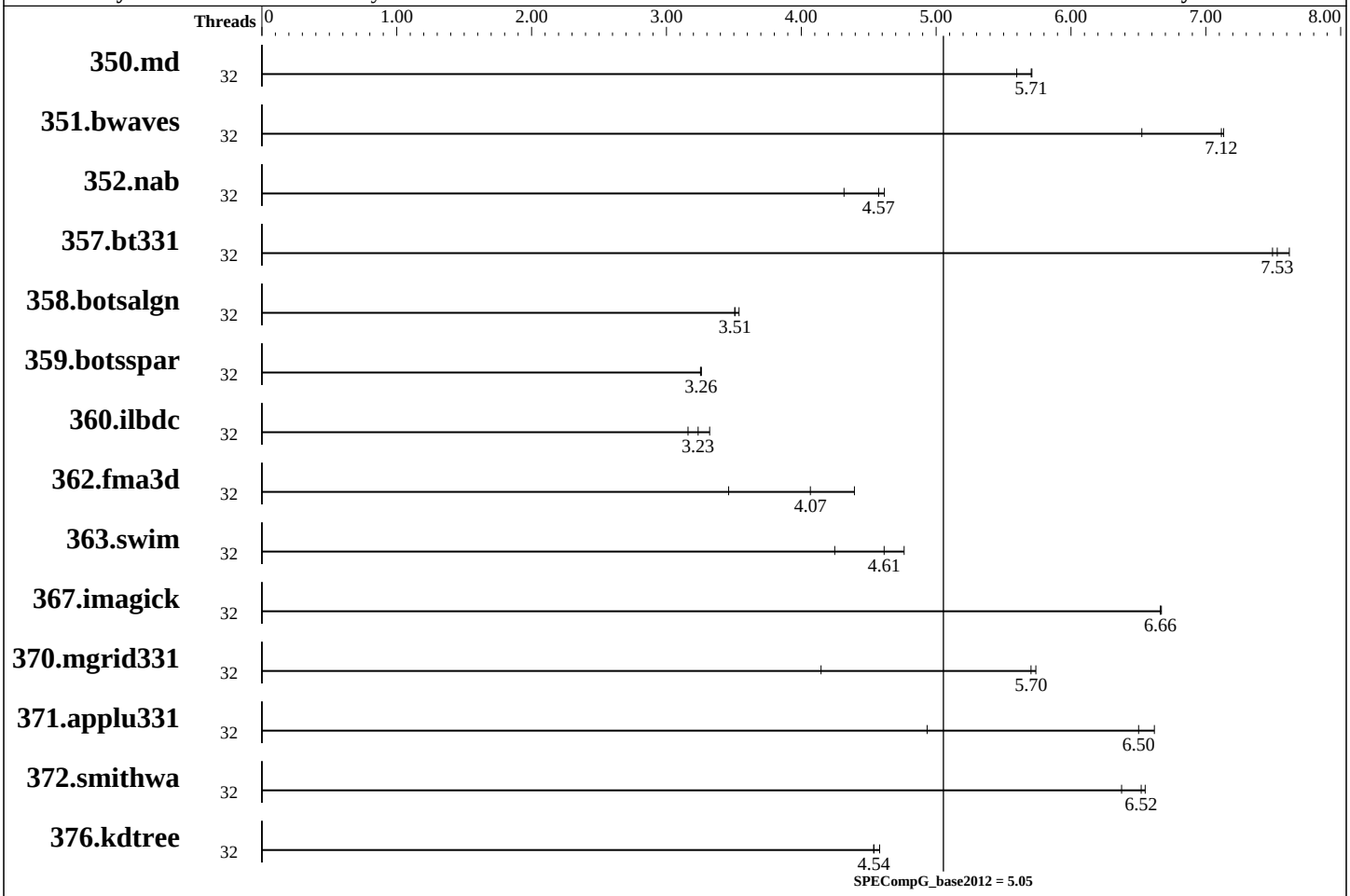
IBM NeXtScale nx360 M4 server

SPECompG_peak2012 = Not Run

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



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	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	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
```

Continued on next page

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

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

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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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