SPEC® OMPG2012 Result

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Cray
(Test Sponsor: Indiana University)

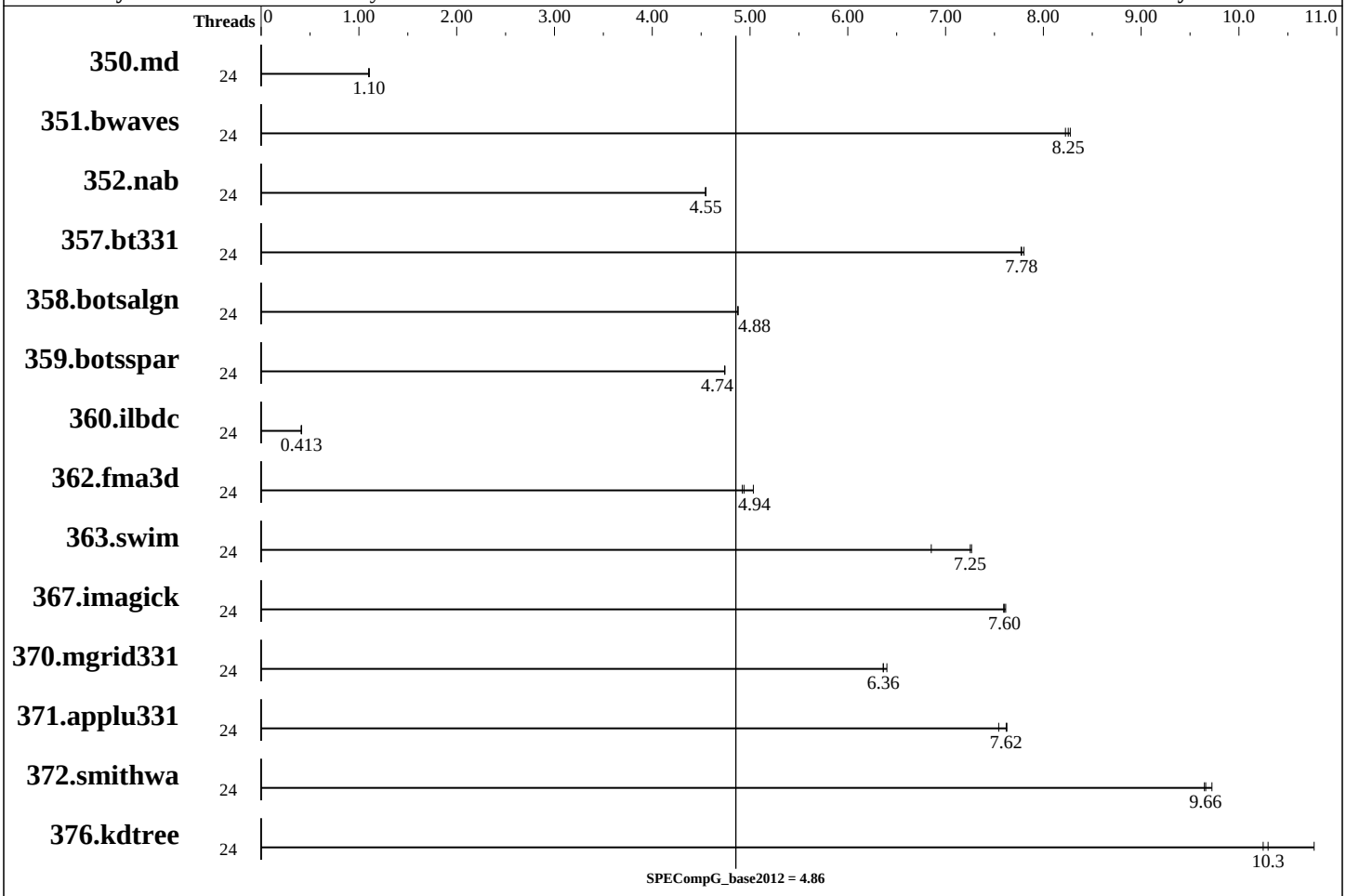
Cray XC30 (Intel Xeon E5-2697 v2)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 4.86

OMP2012 license: 3440A
Test sponsor: Indiana University
Tested by: Indiana University

Test date: Jul-2017
Hardware Availability: Apr-2013
Software Availability: Mar-2017



Hardware

CPU Name:	Intel Xeon E5-2697 v2
CPU Characteristics:	Intel Turbo Boost Technology off, Hyper-Threading on
CPU MHz:	2700
CPU MHz Maximum:	2700
FPU:	Integrated
CPU(s) enabled:	24 cores, 2 chips, 12 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:	30 MB I+D on chip per chip
Other Cache:	None
Memory:	64 GB (8 x 8 GB 2Rx4 PC3-14900R-13, ECC)
Disk Subsystem:	None
Other Hardware:	None
Base Threads Run:	24

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Software

Operating System:	SUSE Linux Enterprise Server 11 SP3 (x86_64), Cray Linux Environment 5.2 3.0.101-0.46.1_1.0502.8871-cray_ari_c
Compiler:	C/C++/Fortran: Version 6.2.0 of gcc, Build 20160822
Auto Parallel:	No
File System:	Lustre 2.5 (DDN SFA12K) over QDR InfiniBand
System State:	Run level 3 (multi-user)
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	24	4185	1.11	4214	1.10	**4196**	**1.10**							
351.bwaves	24	**549**	**8.25**	551	8.23	547	8.28							
352.nab	24	856	4.54	855	4.55	**855**	**4.55**							
357.bt331	24	**609**	**7.78**	610	7.77	608	7.80							
358.botsalgn	24	**892**	**4.88**	892	4.88	892	4.88							
359.botsspar	24	1107	4.74	1107	4.74	**1107**	**4.74**							
360.ilbdc	24	8704	0.409	8594	0.414	**8614**	**0.413**							
362.fma3d	24	772	4.92	**769**	**4.94**	755	5.03							
363.swim	24	661	6.85	623	7.27	**625**	**7.25**							
367.imagick	24	926	7.59	923	7.61	**925**	**7.60**							
370.mgrid331	24	**695**	**6.36**	691	6.40	695	6.36							
371.applu331	24	795	7.63	803	7.54	**795**	**7.62**							
372.smithwa	24	556	9.65	551	9.72	**555**	**9.66**							
376.kdtree	24	418	10.8	**437**	**10.3**	439	10.2							

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

Platform Notes

```
Sysinfo program
/N/dc2/projects/hpc/lijunj/spec/omp2012-1.1-run/bigred2plus2/Docs/sysinfo
Revision 563 of 2016-06-10 (097295389cf6073d8c3b03fa376740a5)
running on nid00540 Fri Jul 14 15:24:11 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 E5-2697 v2 @ 2.70GHz
      2 "physical id"s (chips)
      48 "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 : 12
      siblings  : 24
      physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
      physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
   cache size : 30720 KB
```

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Platform Notes (Continued)

```
From /proc/meminfo
   MemTotal:       66072376 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
   SUSE Linux Enterprise Server 11 (x86_64)

From /etc/*release* /etc/*version*
   SuSE-release:
      SUSE Linux Enterprise Server 11 (x86_64)
      VERSION = 11
      PATCHLEVEL = 3

uname -a:
   Linux nid00540 3.0.101-0.46.1_1.0502.8871-cray_ari_c #1 SMP Mon Jun 26
   15:18:40 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux


SPEC is set to: /N/dc2/projects/hpc/lijunj/spec/omp2012-1.1-run/bigred2plus2
   Filesystem                              Type    Size  Used Avail Use% Mounted
   on
   10.10.0.171@o2ib:10.10.0.172@o2ib:/dc2 lustre  5.3P  5.0P  160T  97% /N/dc2

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

(End of data from sysinfo program)
```

General Notes

```
Environment Variables:
    OMP_STACKSIZE=1G
    ulimit -s unlimited
```

Base Compiler Invocation

C benchmarks:
gcc

C++ benchmarks:
g++

Fortran benchmarks:
gfortran

Base Portability Flags

350.md: `-ffree-form -fno-range-check`
357.bt331: `-mcmodel=medium`
363.swim: `-mcmodel=medium`
367.imagick: `-std=c99`

Base Optimization Flags

C benchmarks:
`-Ofast -march=native -fopenmp`

C++ benchmarks:
`-Ofast -march=native -fopenmp`

Fortran benchmarks:
`-Ofast -march=native -fopenmp`

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

You can also download the XML flags source by saving the following link:
`http://www.spec.org/omp2012/flags/gcc-linux64.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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