SPEC® OMPG2012 Result

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Cray
(Test Sponsor: Indiana University)

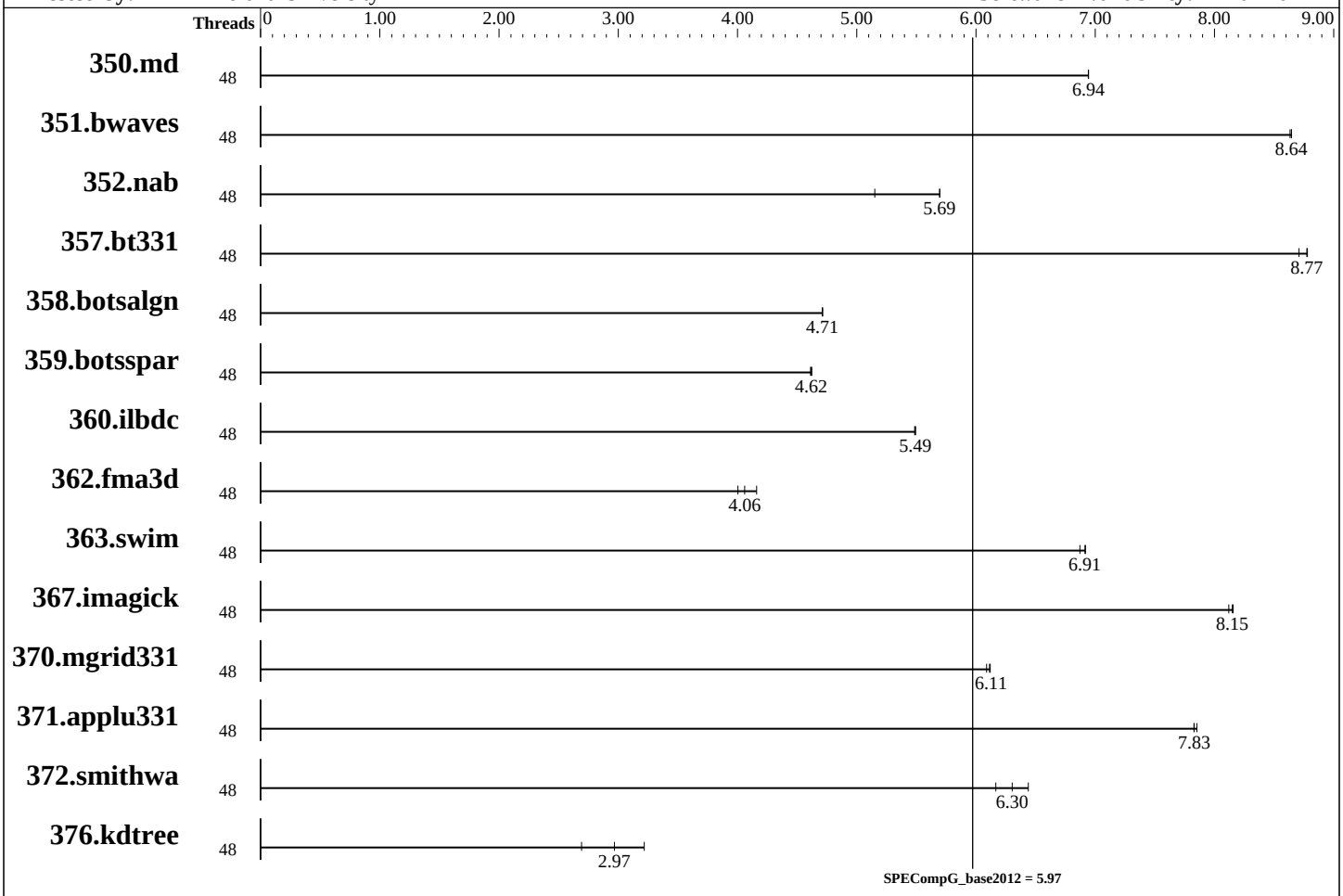
Cray XC30 (Intel Xeon E5-2697 v2)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 5.97

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

Test date: Jun-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:	48

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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 17.5 of PGI Premier Edition
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	48	667	6.94	**667**	**6.94**	667	6.94							
351.bwaves	48	524	8.65	**524**	**8.64**	525	8.63							
352.nab	48	**683**	**5.69**	755	5.15	683	5.70							
357.bt331	48	544	8.71	540	8.78	**540**	**8.77**							
358.botsalgn	48	923	4.71	**923**	**4.71**	923	4.71							
359.botsspar	48	**1137**	**4.62**	1138	4.61	1136	4.62							
360.ilbdc	48	649	5.49	**648**	**5.49**	648	5.49							
362.fma3d	48	949	4.00	**936**	**4.06**	913	4.16							
363.swim	48	**655**	**6.91**	659	6.87	655	6.92							
367.imagick	48	866	8.12	**863**	**8.15**	862	8.16							
370.mgrid331	48	722	6.12	**723**	**6.11**	726	6.09							
371.applu331	48	**774**	**7.83**	774	7.83	772	7.85							
372.smithwa	48	832	6.44	**850**	**6.30**	869	6.17							
376.kdtree	48	1672	2.69	**1516**	**2.97**	1398	3.22							

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/bigred2plus3/Docs/sysinfo
Revision 563 of 2016-06-10 (097295389cf6073d8c3b03fa376740a5)
running on nid00536 Tue Jul 18 07:09:25 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
```

Continued on next page

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 nid00536 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/bigred2plus3
   Filesystem                              Type    Size  Used Avail Use% Mounted
   on
   10.10.0.171@o2ib:10.10.0.172@o2ib:/dc2 lustre  5.3P  4.9P  264T  96% /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:
pgcc

C++ benchmarks:
pgc++

Fortran benchmarks:
pgf90

Base Portability Flags

350.md: `-Mfree`
357.bt331: `-mcmodel=medium`
363.swim: `-mcmodel=medium`

Base Optimization Flags

C benchmarks:
`-fast -Mfprelaxed -mp -Mipa=fast -Mipa=inline`

C++ benchmarks:
`-fast -Mfprelaxed -mp -Mipa=fast -Mipa=inline`

Fortran benchmarks:
`-fast -Mfprelaxed -mp -Mipa=fast -Mipa=inline`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/omp2012/flags/pgi17_linux_flags.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/omp2012/flags/pgi17_linux_flags.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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