SPEC® OMPG2012 Result

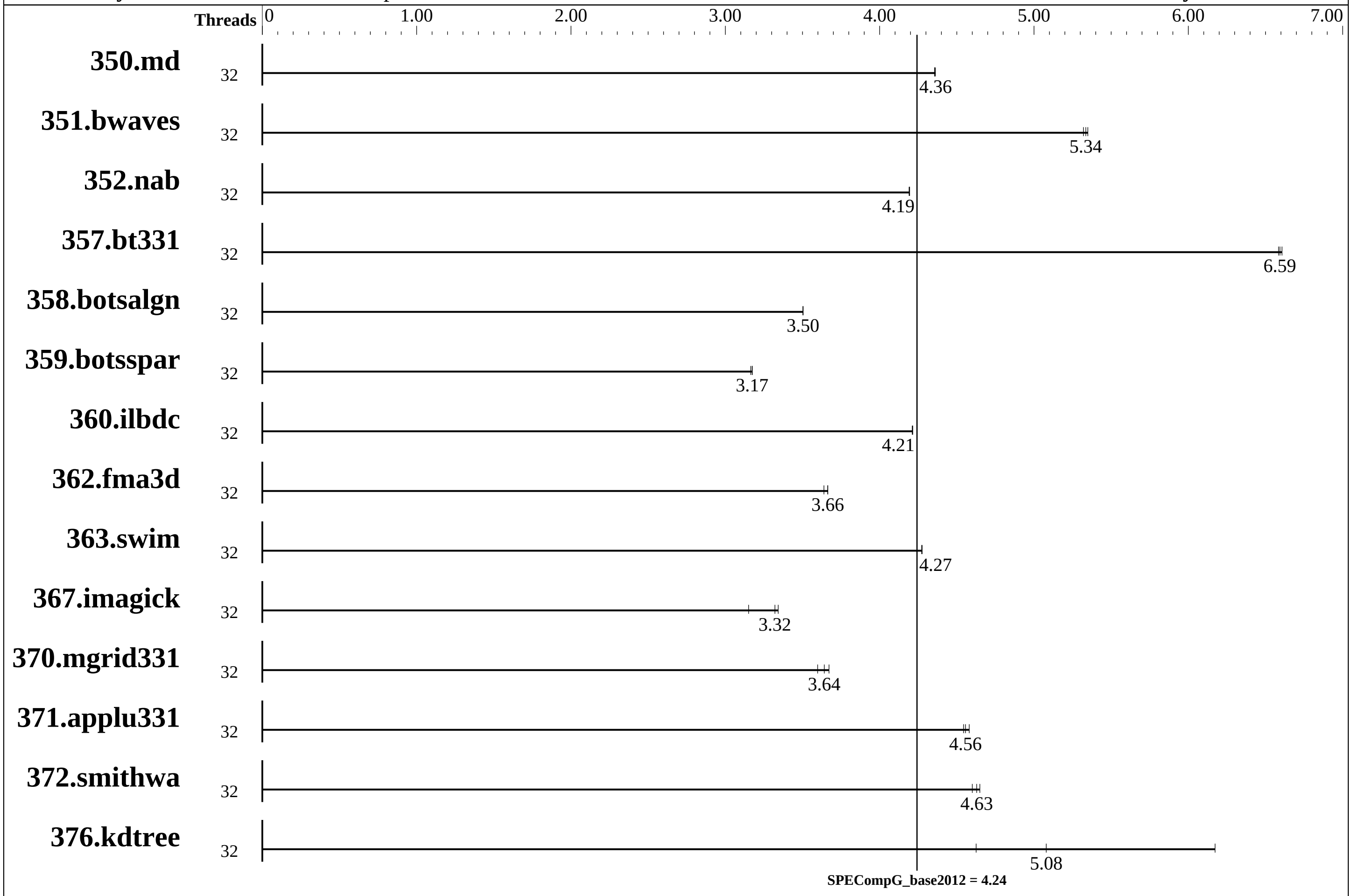
Supermicro
(Test Sponsor: The Portland Group)

A+ Server 2022G-URF

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 4.24

OMP2012 license: 019		**Test date:**	Mar-2013
Test sponsor:	The Portland Group	**Hardware Availability:**	Sep-2012
Tested by:	The Portland Group	**Software Availability:**	Feb-2013



Hardware

CPU Name:	AMD Opteron 6386 SE
CPU Characteristics:	AMD Turbo CORE technology up to 3.50 GHz
CPU MHz:	2800
CPU MHz Maximum:	3500
FPU:	Integrated
CPU(s) enabled:	32 cores, 2 chips, 16 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	512 KB I on chip per chip, 64 KB I shared / 2 cores; 16 KB D on chip per core
Secondary Cache:	16 MB I+D on chip per chip, 2 MB shared / 2 cores
L3 Cache:	16 MB I+D on chip per chip, 8 MB shared / 8 cores
Other Cache:	None
Memory:	64538 MB (8 x 8 GB 2Rx4 PC3L-12800R-11, ECC)
Disk Subsystem:	10 x 144GB, RAID, 10000 RPM
Other Hardware:	None
Base Threads Run:	32

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Software

Operating System:	Red Hat Enterprise Linux Server release 6.2 (Santiago) Linux kernel 2.6.32-220.el6.x86_64
Compiler:	C/C++/Fortran: Version 13.2 of PGI Server Complete
Auto Parallel:	No
File System:	nfs
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	32	1062	4.36	1063	4.36	**1063**	**4.36**							
351.bwaves	32	**849**	**5.34**	847	5.35	851	5.32							
352.nab	32	**928**	**4.19**	927	4.19	928	4.19							
357.bt331	32	720	6.58	717	6.61	**719**	**6.59**							
358.botsalgn	32	1242	3.50	1241	3.50	**1242**	**3.50**							
359.botsspar	32	1654	3.18	1659	3.16	**1654**	**3.17**							
360.ilbdc	32	**845**	**4.21**	845	4.21	845	4.21							
362.fma3d	32	**1037**	**3.66**	1044	3.64	1037	3.66							
363.swim	32	**1060**	**4.27**	1060	4.28	1060	4.27							
367.imagick	32	**2117**	**3.32**	2231	3.15	2103	3.34							
370.mgrid331	32	1228	3.60	**1214**	**3.64**	1204	3.67							
371.applu331	32	**1330**	**4.56**	1334	4.54	1323	4.58							
372.smithwa	32	1165	4.60	**1158**	**4.63**	1153	4.65							
376.kdtree	32	**886**	**5.08**	729	6.17	973	4.63							

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

Platform Notes

```
Sysinfo program /scratch/cparrott/OMP2012_v1.0/Docs/sysinfo
$Rev: 395 $ $Date:: 2012-07-25 #$ 8f8c0fe9e19c658963a1e67685e50647
running on piledriver Sun Mar  3 00:42:57 2013

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 : AMD Opteron(tm) Processor 6386 SE
      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 : 2048 KB

From /proc/meminfo
```

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Platform Notes (Continued)

```
      MemTotal:        66087508 kB
      HugePages_Total:        0
      Hugepagesize:        2048 kB

   /usr/bin/lsb_release -d
      Red Hat Enterprise Linux Server release 6.2 (Santiago)

   From /etc/*release* /etc/*version*
      redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
      system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
      system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

   uname -a:
      Linux piledriver 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13 EST 2011
      x86_64 x86_64 x86_64 GNU/Linux

   run-level 3 Mar 1 15:09

   SPEC is set to: /scratch/cparrott/OMP2012_v1.0
      Filesystem     Type    Size  Used Avail Use% Mounted on
      filer01.pgi.net:/vol/vol1/scratch
                     nfs     727G  136G  591G  19% /proj/scratch

   Additional information from dmidecode:

   (End of data from sysinfo program)
```

General Notes

```
      Software Environment:
          export MP_BIND=yes
          export MP_SPIN=1
          ulimit -s unlimited

      BIOS Settings:
          AMI BIOS 08/31/2012
          Performance defaults loaded
  Definition of environment variables:
  MP_BIND
  You can set MP_BIND to yes or y to bind processes or threads executing in a
  parallel region to physical processor. Set it to no or n to disable such
  binding. The default is to not bind processes to processors. This variable
  is an execution-time environment variable interpreted by the PGI runtime
  support libraries. It does not affect the behavior of the PGI compilers
  in any way.
  MP_SPIN
  When a thread executing in a parallel region enters a barrier, it spins on a
  semaphore. You can use MP_SPIN to specify the number of times it checks the
  semaphore before calling sched_yield() (on Linux or MAC OS X) or _sleep()
  (on Windows). These calls cause the thread to be re-scheduled, allowing
```

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General Notes (Continued)

```
other processes to run. The default value is 1000000.
```

Base Compiler Invocation

C benchmarks:
`pgcc`

C++ benchmarks:
`pgCC`

Fortran benchmarks:
`pgfortran`

Base Portability Flags

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

Base Optimization Flags

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

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

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

The flags file that was used to format this result can be browsed at
http://www.spec.org/omp2012/flags/pgi2013_linux_flags.20130403.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/omp2012/flags/pgi2013_linux_flags.20130403.xml

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

Tested with SPEC OMP2012 v1.0.
Report generated on Tue Jul 22 13:36:45 2014 by SPEC OMP2012 PS/PDF formatter v541.
Originally published on 3 April 2013.