SPEC® OMPG2012 Result

Dell

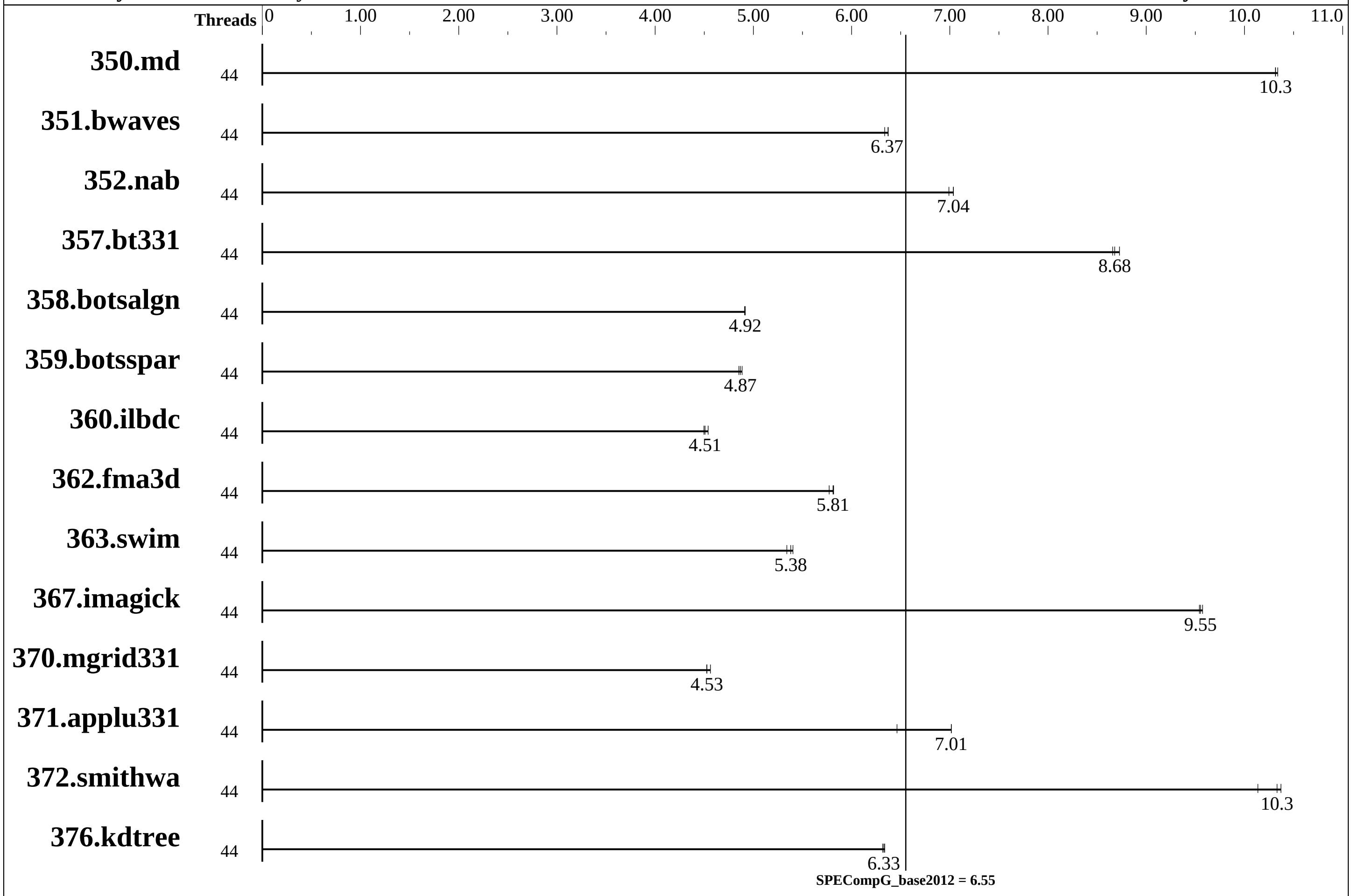
(Test Sponsor: University of Delaware)

Dell M630 Blade Server (KVM virtual machine)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 6.55

OMP2012 license:	056A	**Test date:**	Sep-2018
Test sponsor:	University of Delaware	**Hardware Availability:**	Jun-2018
Tested by:	University of Delaware	**Software Availability:**	Jun-2018



Hardware

CPU Name:	Dual Intel Xeon E5-2680 v3 (44 of 48 ht cores allocated to KVM)
CPU Characteristics:	Intel Turbo Boost Technology off, Hyper-Threading on
CPU MHz:	2500
CPU MHz Maximum:	3300
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:	128 GB (16 x 8 GB 2Rx4 PC4-2133P-R) 118 GB (118/128 GB Allocated to KVM)
Disk Subsystem:	400GB (SATA Mix Use MLC 6Gbps 2.5in Hot-plug Drive,13G (400-AEIX) dual SSDs, RAID-1)

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Software

Operating System:	CentOS Linux release 7.5.1804 (Core) 3.10.0-862.3.3.el7.x86_64
Compiler:	C/C++/Fortran: Version 18.0.3.222 of Intel Parallel Studio XE for Linux Build 20180410
Auto Parallel:	No
File System:	CephFS
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	Not Applicable
Other Software:	KVM Version 2.10.0-21

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OMP2012 license:056A
Test sponsor: University of Delaware
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Test date: Sep-2018
Hardware Availability: Jun-2018
Software Availability: Jun-2018

Other Hardware: None
Base Threads Run: 44
Minimum Peak Threads: --
Maximum Peak Threads: --

Results Table

	Base							Peak						
Benchmark	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
350.md	44	449	10.3	448	10.3	**449**	**10.3**							
351.bwaves	44	715	6.34	711	6.37	**711**	**6.37**							
352.nab	44	**553**	**7.04**	553	7.04	556	6.99							
357.bt331	44	**546**	**8.68**	543	8.73	547	8.66							
358.botsalgn	44	886	4.91	885	4.92	**885**	**4.92**							
359.botsspar	44	1082	4.85	1075	4.89	**1079**	**4.87**							
360.ilbdc	44	792	4.50	**790**	**4.51**	784	4.54							
362.fma3d	44	658	5.77	653	5.82	**654**	**5.81**							
363.swim	44	**842**	**5.38**	838	5.40	848	5.34							
367.imagick	44	734	9.57	**736**	**9.55**	737	9.54							
370.mgrid331	44	977	4.53	969	4.56	**976**	**4.53**							
371.applu331	44	938	6.46	**864**	**7.01**	864	7.02							
372.smithwa	44	517	10.4	**519**	**10.3**	529	10.1							
376.kdtree	44	**711**	**6.33**	713	6.32	710	6.34							

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

Platform Notes

```
Sysinfo program /home/tmh97/SPEC_OMP2012v1.1/Docs/sysinfo
Revision 563 of 2016-06-10 (097295389cf6073d8c3b03fa376740a5)
running on js-169-102.jetstream-cloud.org Thu Jul  5 12:30:53 2018

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 E5-2680 v3 @ 2.50GHz
      44 "physical id"s (chips)
      44 "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 : 1
      siblings  : 1
      physical 0: cores 0
      physical 1: cores 0
      physical 2: cores 0
```

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Platform Notes (Continued)

```
            physical 3: cores 0
            physical 4: cores 0
            physical 5: cores 0
            physical 6: cores 0
            physical 7: cores 0
            physical 8: cores 0
            physical 9: cores 0
            physical 10: cores 0
            physical 11: cores 0
            physical 12: cores 0
            physical 13: cores 0
            physical 14: cores 0
            physical 15: cores 0
            physical 16: cores 0
            physical 17: cores 0
            physical 18: cores 0
            physical 19: cores 0
            physical 20: cores 0
            physical 21: cores 0
            physical 22: cores 0
            physical 23: cores 0
            physical 24: cores 0
            physical 25: cores 0
            physical 26: cores 0
            physical 27: cores 0
            physical 28: cores 0
            physical 29: cores 0
            physical 30: cores 0
            physical 31: cores 0
            physical 32: cores 0
            physical 33: cores 0
            physical 34: cores 0
            physical 35: cores 0
            physical 36: cores 0
            physical 37: cores 0
            physical 38: cores 0
            physical 39: cores 0
            physical 40: cores 0
            physical 41: cores 0
            physical 42: cores 0
            physical 43: cores 0
         cache size : 16384 KB

      From /proc/meminfo
         MemTotal:       123602104 kB
         HugePages_Total:       0
         Hugepagesize:       2048 kB

      /usr/bin/lsb_release -d
         CentOS Linux release 7.5.1804 (Core)

      From /etc/*release* /etc/*version*
```

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Platform Notes (Continued)

```
    centos-release: CentOS Linux release 7.5.1804 (Core)
    centos-release-upstream: Derived from Red Hat Enterprise Linux 7.5 (Source)
    os-release:
       NAME="CentOS Linux"
       VERSION="7 (Core)"
       ID="centos"
       ID_LIKE="rhel fedora"
       VERSION_ID="7"
       PRETTY_NAME="CentOS Linux 7 (Core)"
       ANSI_COLOR="0;31"
       CPE_NAME="cpe:/o:centos:centos:7"
    redhat-release: CentOS Linux release 7.5.1804 (Core)
    system-release: CentOS Linux release 7.5.1804 (Core)
    system-release-cpe: cpe:/o:centos:centos:7

 uname -a:
    Linux js-169-102.jetstream-cloud.org 3.10.0-862.3.3.el7.x86_64 #1 SMP Fri Jun
    15 04:15:27 UTC 2018 x86_64 x86_64 x86_64 GNU/Linux

 run-level 5 Jun 27 13:49

 SPEC is set to: /home/tmh97/SPEC_OMP2012v1.1
    Filesystem     Type  Size  Used Avail Use% Mounted on
    /dev/sda1      xfs    60G   39G   22G  64% /
 Additional information from dmidecode:

    Warning: Use caution when you interpret this section. The 'dmidecode' program
    reads system data which is "intended to allow hardware to be accurately
    determined", but the intent may not be met, as there are frequent changes to
    hardware, firmware, and the "DMTF SMBIOS" standard.


 (End of data from sysinfo program)
```

General Notes

```
Jetstream VM Configuration:
    1 VM instance running OMP2012 on single node with 44 VCPUS and 118 GB memory
    44 of the 48 available VCPUS are allocated to KVM

Environment Variables:
    KMP_STACKSIZE=1G
    ulimit -s unlimited

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1)
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)
```

Base Compiler Invocation

C benchmarks:
`icc`

C++ benchmarks:
`icpc`

Fortran benchmarks:
`ifort`

Base Portability Flags

350.md: `-free`
357.bt331: `-mcmodel=medium`
363.swim: `-mcmodel=medium`
367.imagick: `-std=c99`

Base Optimization Flags

C benchmarks:
`-ansi-alias -qopenmp -ipo -O3 -no-prec-div -no-prec-sqrt -fp-model fast=2 -xHost`

C++ benchmarks:
`-ansi-alias -qopenmp -ipo -O3 -no-prec-div -no-prec-sqrt -fp-model fast=2 -xHost`

Fortran benchmarks:
`-qopenmp -ipo -O3 -no-prec-div -no-prec-sqrt -fp-model fast=2 -xHost`

The flags file that was used to format this result can be browsed at
http://www.spec.org/omp2012/flags/Intel-ic17-linux64.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/omp2012/flags/Intel-ic17-linux64.xml