SPEC ACCEL™ OMP Result

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Cray
(Test Sponsor: Indiana University)

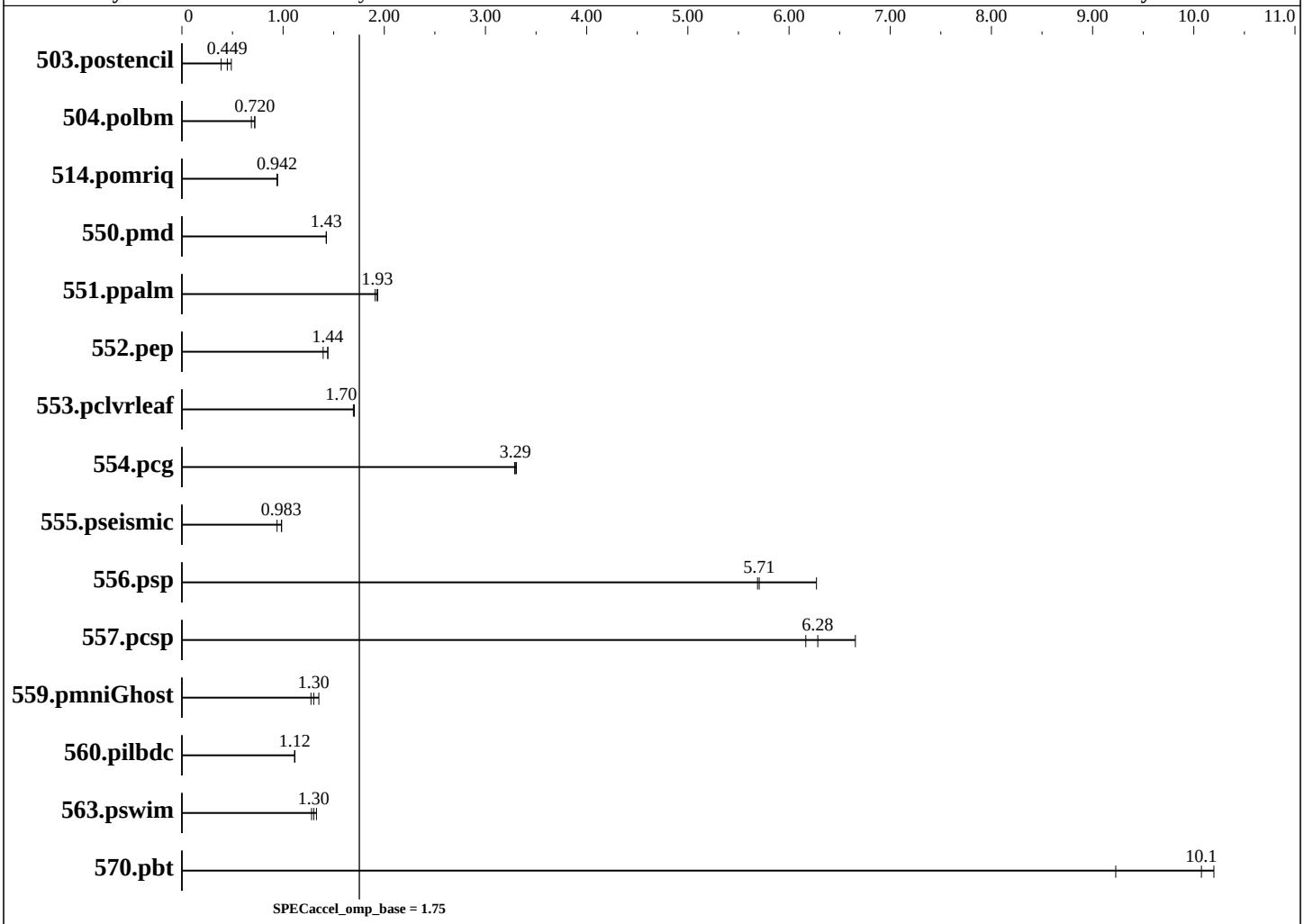
Intel Xeon E5-2697 v2
Cray XC30

SPECaccel_omp_peak = Not Run

SPECaccel_omp_base = 1.75

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

Test date: Aug-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

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Accelerator

Accel Model Name:	Intel Xeon E5-2697 v2
Accel Vendor:	Intel
Accel Name:	Intel Xeon E5-2697 v2
Type of Accel:	CPU
Accel Connection:	N/A
Does Accel Use ECC:	Yes
Accel Description:	Intel Xeon E5-2697 v2 @ 2.7 GHz
Accel Driver:	None

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Hardware (Continued)

Other Cache: None
Memory: 64 GB (8 x 8 GB 2Rx4 PC3-14900R-13, ECC)
Disk Subsystem: None
Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64), Cray Linux Environment 5.2, 3.0.101-0.46.1_1.0502.8871-cray_ari_c
Compiler: Version 17.0.2.174 of Intel Parallel Studio XE for Linux Build 20170213
File System: Lustre 2.5 (DDN SFA12K) over QDR InfiniBand
System State: Run level 3 (multi-user)
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.postencil	281	0.388	**243**	**0.449**	223	0.488						
504.polbm	169	0.720	**170**	**0.720**	178	0.686						
514.pomriq	**659**	**0.942**	658	0.944	659	0.942						
550.pmd	169	1.43	**169**	**1.43**	169	1.43						
551.ppalm	281	1.93	285	1.91	**282**	**1.93**						
552.pep	165	1.40	**160**	**1.44**	160	1.44						
553.pclvrleaf	672	1.70	**673**	**1.70**	676	1.69						
554.pcg	**101**	**3.29**	101	3.29	101	3.31						
555.pseismic	286	0.986	300	0.940	**287**	**0.983**						
556.psp	130	6.27	144	5.69	**143**	**5.71**						
557.pcsp	139	6.17	129	6.66	**137**	**6.28**						
559.pmniGhost	311	1.28	293	1.35	**305**	**1.30**						
560.pilbdc	585	1.12	587	1.11	**585**	**1.12**						
563.pswim	124	1.28	120	1.33	**122**	**1.30**						
570.pbt	**77.4**	**10.1**	76.5	10.2	84.5	9.23						

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/accel-1.2-run/br2p/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3fe1df68447e8a35
running on nid00570 Sat Aug 12 19:54:36 2017
```

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Platform Notes (Continued)

```
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/accel/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

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 nid00570 3.0.101-0.46.1_1.0502.8871-cray_ari_c #1 SMP Tue Jul 18
   17:24:02 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux


SPEC is set to: /N/dc2/projects/hpc/lijunj/spec/accel-1.2-run/br2p
   Filesystem                              Type    Size  Used Avail Use% Mounted
   on
   10.10.0.171@o2ib:10.10.0.172@o2ib:/dc2 lustre  5.3P  5.0P  198T  97% /N/dc2

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

(End of data from sysinfo program)
```

Base Compiler Invocation

C benchmarks:
icc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

Base Portability Flags

503.postencil: -DSPEC_USE_INNER_SIMD
504.polbm: -DSPEC_USE_INNER_SIMD
514.pomriq: -DSPEC_USE_INNER_SIMD
550.pmd: -DSPEC_USE_INNER_SIMD -80
551.ppalm: -DSPEC_USE_INNER_SIMD
552.pep: -DSPEC_USE_INNER_SIMD
553.pclvrleaf: -DSPEC_USE_INNER_SIMD
554.pcg: -DSPEC_USE_INNER_SIMD
555.pseismic: -DSPEC_USE_INNER_SIMD
556.psp: -DSPEC_USE_INNER_SIMD
557.pcsp: -DSPEC_USE_INNER_SIMD
559.pmniGhost: -DSPEC_USE_INNER_SIMD -nofor-main
560.pilbdc: -DSPEC_USE_INNER_SIMD
563.pswim: -DSPEC_USE_INNER_SIMD
570.pbt: -DSPEC_USE_INNER_SIMD

Base Optimization Flags

C benchmarks:
-O3 -qopenmp -qopenmp-offload=host -xHost

Fortran benchmarks:
-O3 -qopenmp -qopenmp-offload=host -xHost

Benchmarks using both Fortran and C:
-O3 -qopenmp -qopenmp-offload=host -xHost

The flags file that was used to format this result can be browsed at
https://www.spec.org/accel/flags/Intel-icc17.0-linux64.20170830.html

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You can also download the XML flags source by saving the following link:
`https://www.spec.org/accel/flags/Intel-icc17.0-linux64.20170830.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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