



SPEC ACCEL™ OMP Result

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Lenovo

(Test Sponsor: Indiana University)

Intel Xeon E5-2680 v3

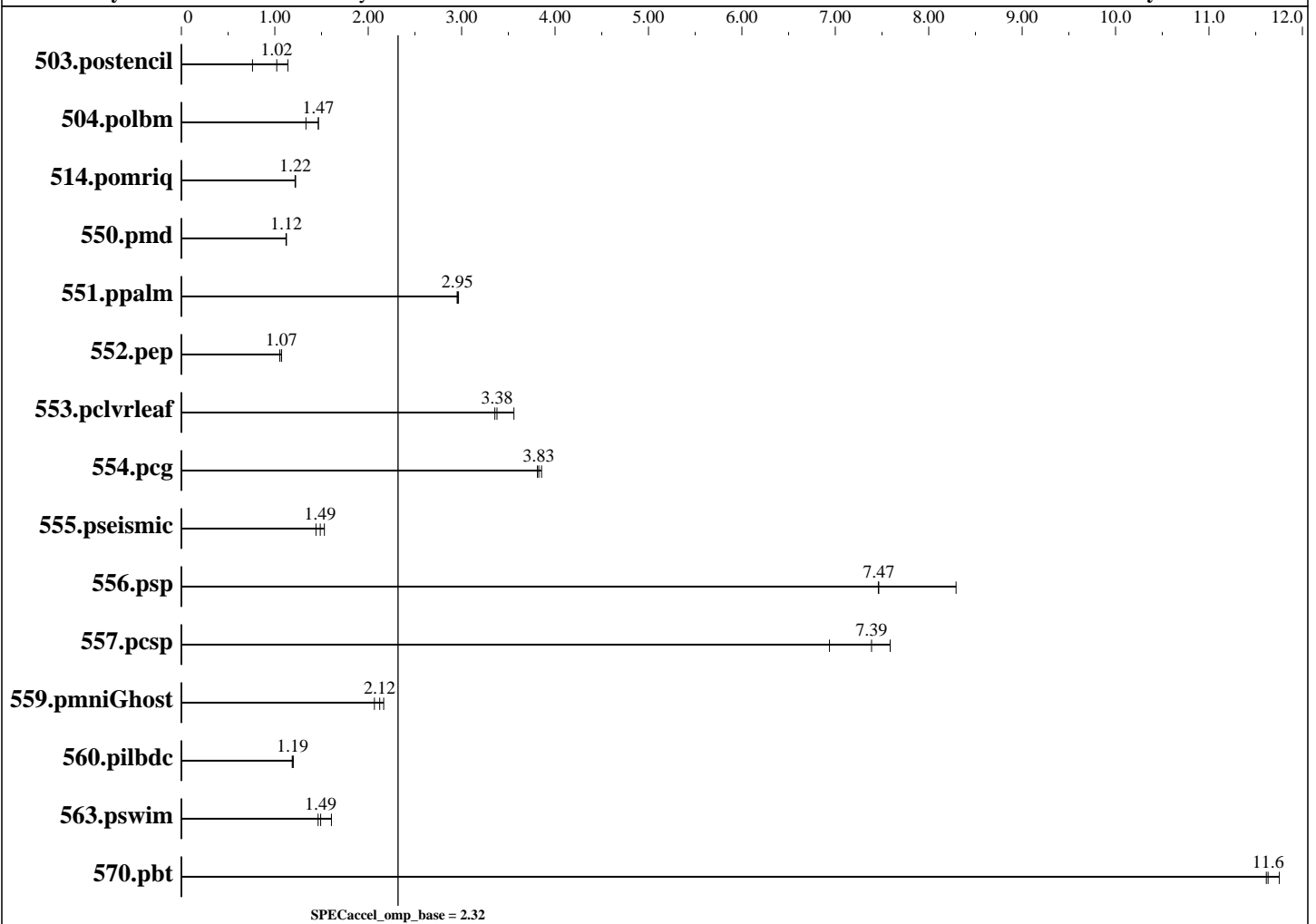
Lenovo NeXtScale nx360 M5

SPECaccel_omp_peak = Not Run

SPECaccel_omp_base = 2.32

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

Test date: Aug-2017
Hardware Availability: Sep-2014
Software Availability: Mar-2017



Hardware

CPU Name: Intel Xeon E5-2680 v3
 CPU Characteristics: Intel Turbo Boost Technology on, Hyper-threading off.
 CPU MHz: 2500
 CPU MHz Maximum: 3300
 FPU: Integrated
 CPU(s) enabled: 24 cores, 2 chips, 12 cores/chip
 CPU(s) orderable: 1-2 chip
 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 E5-2680 v3
 Accel Vendor: Intel
 Accel Name: Intel Xeon E5-2680 v3
 Type of Accel: CPU
 Accel Connection: N/A
 Does Accel Use ECC: yes
 Accel Description: Intel Xeon E5-2680 v3 @2.5~3.3GHz
 Accel Driver: None



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Hardware (Continued)

Other Cache: None
Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)
Disk Subsystem: None
Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 7.3 (Maipo)
3.10.0-514.26.1.el7.x86_64
Compiler: Intel Parallel Studio XE 2017 for Linux
Version 17.0.3.191 Build 20170404
File System: Lustre 2.5 (DDN SFA12K) over 10Gb ethernet
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	143	0.761	107	1.02	95.6	1.14						
504.polbm	91.5	1.33	83.2	1.47	83.2	1.47						
514.pomriq	509	1.22	510	1.22	508	1.22						
550.pmd	215	1.12	214	1.12	215	1.12						
551.ppalm	184	2.95	184	2.95	183	2.97						
552.pep	219	1.05	215	1.07	215	1.07						
553.pclvrleaf	339	3.38	341	3.36	322	3.56						
554.pcg	86.4	3.86	87.0	3.83	87.4	3.81						
555.pseismic	190	1.49	184	1.53	196	1.44						
556.psp	110	7.47	110	7.46	98.6	8.29						
557.pcsp	124	6.94	113	7.59	116	7.39						
559.pmniGhost	183	2.17	192	2.07	187	2.12						
560.pilbdc	550	1.19	545	1.20	548	1.19						
563.pswim	107	1.49	99.0	1.61	109	1.46						
570.pbt	67.1	11.6	67.2	11.6	66.4	11.8						

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/carbonate/Docs/sysinfo
\$Rev: 6965 \$ \$Date:: 2015-04-21 # \$ c05a7f14b1b1765e3fe1df68447e8a35
running on c13 Thu Aug 10 22:19:47 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 E5-2680 v3 @ 2.50GHz
 2 "physical id"s (chips)
 24 "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 : 12
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:      263439912 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

```
From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.3 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.3"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.3 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.3:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.3:ga:server
```

```
uname -a:
Linux c13 3.10.0-514.26.1.el7.x86_64 #1 SMP Tue Jun 20 01:16:02 EDT 2017
x86_64 x86_64 x86_64 GNU/Linux
```

run-level 3 Aug 1 19:29

```
SPEC is set to: /N/dc2/projects/hpc/lijunj/SPEC/accel-1.2-run/carbonate
Filesystem      Type      Size  Used Avail Use% Mounted
on
10.10.0.171@o2ib:10.10.0.172@o2ib:/dc2 lustre  5.3P  5.0P  239T  96% /N/dc2
Additional information from dmidecode:
```

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Platform Notes (Continued)

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)

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.pfsp: -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

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Base Optimization Flags (Continued)

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>

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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