SPEC ACCEL™ ACC Result

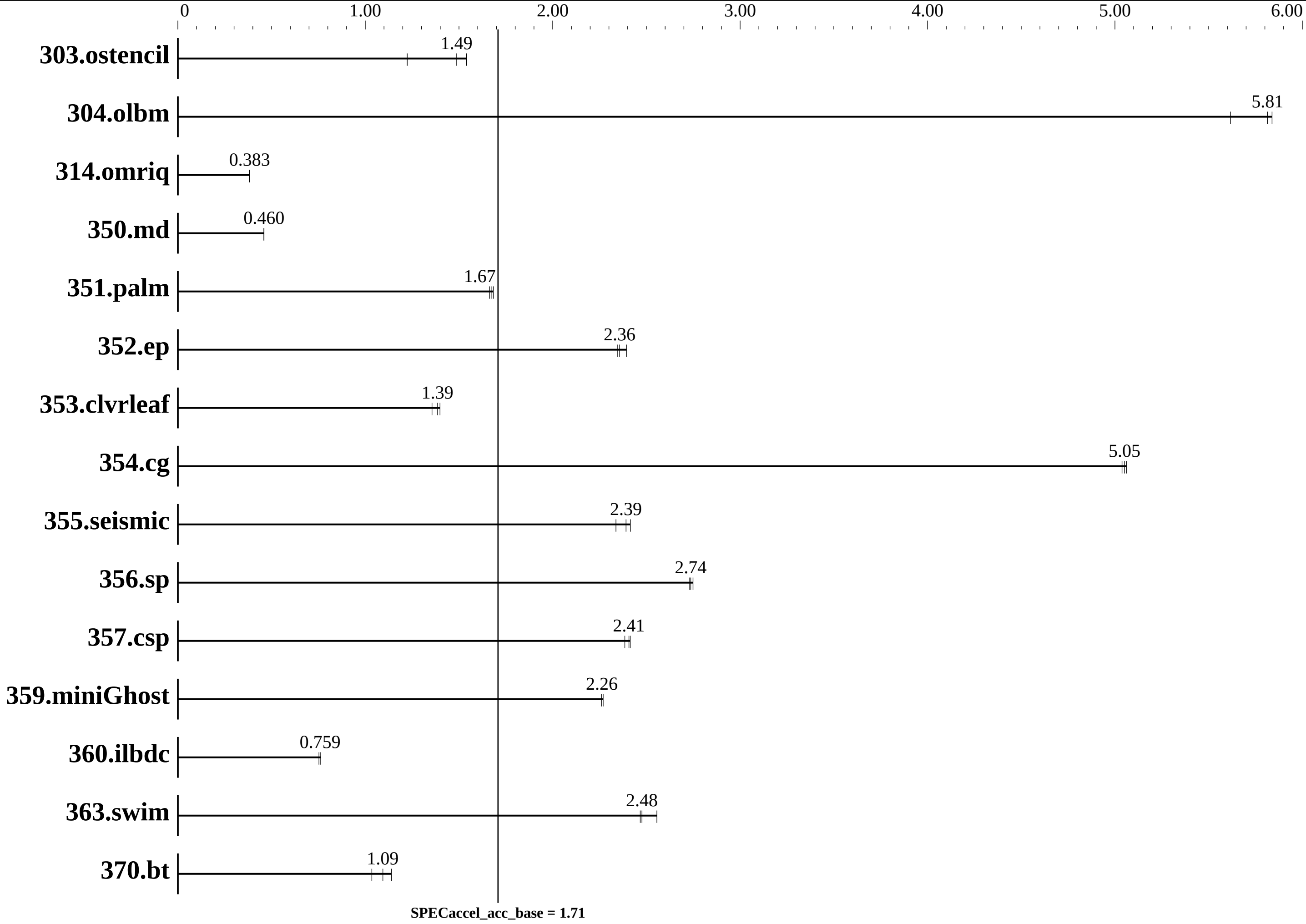
Lenovo
(Test Sponsor: Indiana University)

Intel Xeon E5-2680 v3
Lenovo NeXtScale nx360 M5

SPECaccel_acc_peak = Not Run

SPECaccel_acc_base = 1.71

ACCEL license:	3440A	**Test date:**	Aug-2017
Test sponsor:	Indiana University	**Hardware Availability:**	Sep-2014
Tested by:	Indiana University	**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: PGI Professional Edition, Release 17.3
File System: Lustre 2.5 (DDN SFA12K) over 10Gb ethernet
System State: Run level 3 (multi-user)
Other Software: None

Results Table

	Base						Peak					
Benchmark	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
303.ostencil	118	1.22	**97.5**	**1.49**	94.2	1.54						
304.olbm	81.0	5.62	77.9	5.84	**78.3**	**5.81**						
314.omriq	2496	0.383	**2496**	**0.383**	2504	0.382						
350.md	548	0.460	**548**	**0.460**	548	0.460						
351.palm	222	1.66	220	1.68	**221**	**1.67**						
352.ep	226	2.35	**225**	**2.36**	221	2.39						
353.clvrleaf	328	1.36	**321**	**1.39**	318	1.40						
354.cg	**80.8**	**5.05**	81.0	5.04	80.6	5.06						
355.seismic	158	2.34	153	2.41	**155**	**2.39**						
356.sp	101	2.73	**101**	**2.74**	100	2.75						
357.csp	113	2.38	112	2.41	**112**	**2.41**						
359.miniGhost	163	2.26	**163**	**2.26**	163	2.27						
360.ilbdc	481	0.763	487	0.753	**483**	**0.759**						
363.swim	93.2	2.47	90.0	2.56	**92.9**	**2.48**						
370.bt	**204**	**1.09**	196	1.14	215	1.03						

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 c11 Thu Aug 10 22:19:45 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 c11 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:

   Warning: Use caution when you interpret this section. The 'dmidecode' program
```

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Platform Notes (Continued)

```
     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:
`pgcc`

Fortran benchmarks:
`pgfortran`

Benchmarks using both Fortran and C:
`pgcc pgfortran`

Base Optimization Flags

C benchmarks:
`-fast -Mfprelaxed -acc -ta=multicore`

Fortran benchmarks:
`-fast -Mfprelaxed -acc -ta=multicore`

Benchmarks using both Fortran and C:

353.clvrleaf: `-fast -Mfprelaxed -acc -ta=multicore`

359.miniGhost: `-fast -Mfprelaxed -acc -ta=multicore -Mnomain`

The flags file that was used to format this result can be browsed at
https://www.spec.org/accel/flags/pgi2017_flags.20170830.html

You can also download the XML flags source by saving the following link:
https://www.spec.org/accel/flags/pgi2017_flags.20170830.xml

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

Tested with SPEC ACCEL v1.2.
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