

SPEC ACCEL™ ACC Result

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Supermicro
(Test Sponsor: NVIDIA Corporation)

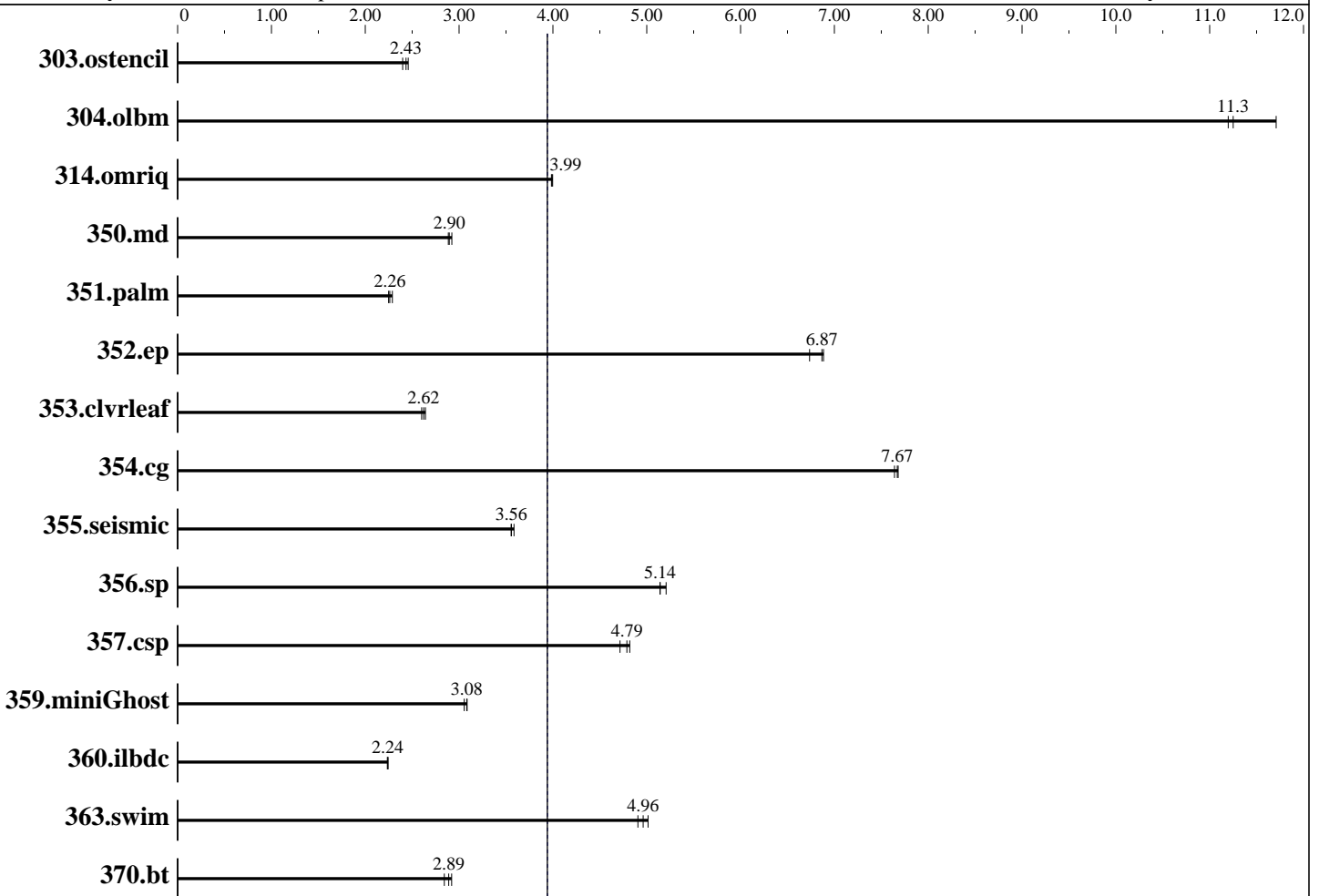
Xeon Gold 6148
SYS-1029GQ-TRT

SPECaccel_acc_peak = 3.94

SPECaccel_acc_base = 3.94

ACCEL license: 019
Test sponsor: NVIDIA Corporation
Tested by: NVIDIA Corporation

Test date: May-2019
Hardware Availability: Nov-2017
Software Availability: Nov-2018



SPECaccel_acc_base = 3.94

SPECaccel_acc_peak = 3.94

Hardware

CPU Name: Intel Xeon Gold 6148
CPU Characteristics:
CPU MHz: 2400
CPU MHz Maximum: 2400
FPU: Integrated
CPU(s) enabled: 40 cores, 2 chips, 40 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: 1 MB I+D on chip per core
L3 Cache: 28160 KB I+D on chip per chip
Other Cache: None

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Accelerator

Accel Model Name: Intel Xeon CPU Gold 6148
Accel Vendor: Intel Corporation
Accel Name: Xeon Gold 6148
Type of Accel: CPU
Accel Connection: Not Applicable
Does Accel Use ECC: Yes
Accel Description: --
Accel Driver: None

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Hardware (Continued)

Memory: 384 GB (12 x 32 GB 2Rx8 PC4-2666V-R)
Disk Subsystem: Micron 51000 ECO M.2 480GB SATA SSD
Other Hardware: None

Software

Operating System: CentOS Linux release 7.6.1810 (Core)
3.10.0-957.1.3.el7.x86_64
Compiler: PGI Professional Edition, Release 19.4
File System: xfs
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
303.ostencil	<u>59.6</u>	<u>2.43</u>	60.5	2.40	59.0	2.46	<u>59.6</u>	<u>2.43</u>	60.5	2.40	59.0	2.46
304.olbm	<u>40.4</u>	<u>11.3</u>	40.6	11.2	38.9	11.7	<u>40.4</u>	<u>11.3</u>	40.6	11.2	38.9	11.7
314.omriq	239	4.00	240	3.98	<u>240</u>	<u>3.99</u>	239	4.00	240	3.98	<u>240</u>	<u>3.99</u>
350.md	87.3	2.89	86.2	2.92	<u>87.0</u>	<u>2.90</u>	87.3	2.89	86.2	2.92	<u>87.0</u>	<u>2.90</u>
351.palm	162	2.29	<u>164</u>	<u>2.26</u>	165	2.25	162	2.29	<u>164</u>	<u>2.26</u>	165	2.25
352.ep	78.7	6.74	<u>77.2</u>	<u>6.87</u>	77.0	6.88	78.7	6.74	<u>77.2</u>	<u>6.87</u>	77.0	6.88
353.clvleaf	168	2.64	171	2.60	<u>170</u>	<u>2.62</u>	168	2.64	171	2.60	<u>170</u>	<u>2.62</u>
354.cg	<u>53.2</u>	<u>7.67</u>	53.4	7.64	53.1	7.68	<u>53.2</u>	<u>7.67</u>	53.4	7.64	53.1	7.68
355.seismic	<u>104</u>	<u>3.56</u>	104	3.55	103	3.59	<u>104</u>	<u>3.56</u>	104	3.55	103	3.59
356.sp	53.7	5.14	<u>53.7</u>	<u>5.14</u>	53.0	5.21	53.7	5.14	<u>53.7</u>	<u>5.14</u>	53.0	5.21
357.csp	<u>56.4</u>	<u>4.79</u>	57.3	4.71	56.0	4.82	<u>56.4</u>	<u>4.79</u>	57.3	4.71	56.0	4.82
359.miniGhost	120	3.09	121	3.05	<u>120</u>	<u>3.08</u>	120	3.09	121	3.05	<u>120</u>	<u>3.08</u>
360.ilbdc	<u>164</u>	<u>2.24</u>	164	2.24	164	2.24	<u>164</u>	<u>2.24</u>	164	2.24	164	2.24
363.swim	46.9	4.91	<u>46.4</u>	<u>4.96</u>	45.9	5.01	46.9	4.91	<u>46.4</u>	<u>4.96</u>	45.9	5.01
370.bt	<u>77.2</u>	<u>2.89</u>	78.5	2.84	76.4	2.92	<u>77.2</u>	<u>2.89</u>	78.5	2.84	76.4	2.92

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

Operating System Notes

Stacksize set to 'unlimited'

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Platform Notes

```
Sysinfo program /local/home/toepfer/SPECACCEL/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3feldf68447e8a35
running on perf-sky6 Wed May 29 09:44:00 2019
```

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) Gold 6148 CPU @ 2.40GHz
 2 "physical id"s (chips)
 80 "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 : 20
  siblings  : 40
  physical 0: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28
  physical 1: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28
cache size : 28160 KB
```

```
From /proc/meminfo
MemTotal:      394869788 kB
HugePages_Total:       20
Hugepagesize:   2048 kB
```

```
/usr/bin/lsb_release -d
CentOS Linux release 7.6.1810 (Core)
```

```
From /etc/*release* /etc/*version*
centos-release: CentOS Linux release 7.6.1810 (Core)
centos-release-upstream: Derived from Red Hat Enterprise Linux 7.6 (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 7.6.1810 (Core)
system-release: CentOS Linux release 7.6.1810 (Core)
system-release-cpe: cpe:/o:centos:centos:7
```

```
uname -a:
Linux perf-sky6 3.10.0-957.1.3.el7.x86_64 #1 SMP Thu Nov 29 14:49:43 UTC 2018
x86_64 x86_64 x86_64 GNU/Linux
```

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Platform Notes (Continued)

run-level 3 Jan 28 10:37

SPEC is set to: /local/home/toepfer/SPECACCEL

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/mapper/centos_perf--sky6-root	xfs	443G	32G	411G	8%	/

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

Environment variables set by runspec before the start of the run:
ACC_NUM_CORES = "80"
HUGETLB_PATH = "/mnt/hugetlb"
OMP_PROC_BIND = "true"

Base Compiler Invocation

C benchmarks:
pgcc

Fortran benchmarks:
pgfortran

Benchmarks using both Fortran and C:
pgcc pgfortran

Base Optimization Flags

C benchmarks:
-fast -Mfprelaxed -Mnouniform -Mhugetlb -acc -ta=multicore

Fortran benchmarks:
-fast -Mfprelaxed -Mnouniform -Mhugetlb -acc -ta=multicore

Benchmarks using both Fortran and C:

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Base Optimization Flags (Continued)

353.cvrleaf: -fast -Mfprelaxed -Mnouniform -Mhugetlb -acc
-ta=multicore

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

Peak Optimization Flags

C benchmarks:

303.ostencil: basepeak = yes

304.olbm: basepeak = yes

314.omriq: basepeak = yes

352.ep: basepeak = yes

354.cg: basepeak = yes

357.csp: basepeak = yes

370.bt: basepeak = yes

Fortran benchmarks:

350.md: basepeak = yes

351.palm: basepeak = yes

355.seismic: basepeak = yes

356.sp: basepeak = yes

360.ilbdc: basepeak = yes

363.swim: basepeak = yes

Benchmarks using both Fortran and C:

353.cvrleaf: basepeak = yes

359.miniGhost: basepeak = yes

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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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