SPEC ACCEL™ OMP Result

Supermicro
(Test Sponsor: NVIDIA Corporation)

Intel Xeon Gold 6148
SuperServer 1029Q-TRT

SPECCaccel_omp_peak = Not Run
SPECCaccel_omp_base = 4.93

ACCEL license: 019
Test sponsor: NVIDIA Corporation
Tested by: NVIDIA Corporation
Test date: Nov-2019
Hardware Availability: Jul-2017
Software Availability: Nov-2019

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Result</th>
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<tbody>
<tr>
<td>503.postencil</td>
<td>2.41</td>
</tr>
<tr>
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<td>557.pcsnp</td>
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<td>559.pmniGhost</td>
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<td>560.pilbdc</td>
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<td>563.pswim</td>
<td>3.54</td>
</tr>
<tr>
<td>570.pbt</td>
<td></td>
</tr>
</tbody>
</table>

SPECCaccel_omp_base = 4.93

### Hardware

- **CPU Name:** Intel Xeon Gold 6148
- **CPU Characteristics:**
  - CPU MHz: 2400
  - CPU MHz Maximum: 3700
  - FPU: --
  - CPU(s) enabled: 40 cores, 2 chips, 20 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

### Accelerator

- **Accel Model Name:** Xeon Gold 6148
- **Accel Vendor:** Intel
- **Accel Name:** Intel Xeon Gold 6148
- **Type of Accel:** CPU
- **Accel Connection:** Not applicable
- **Does Accel Use ECC:** Yes
- **Accel Description:** --
- **Accel Driver:** --

Continued on next page
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Hardware (Continued)
Memory: 384 GB
   376.577 GB fixme: If using DDR3, format is:
   'N GB (M x N GB nRxN PCn-nmmR-n, ECC)'
Disk Subsystem: 443 GB add more disk info here
Other Hardware: None

Software
Operating System: CentOS Linux release 7.6.1810 (Core)
CentOS Linux release 7.6.1810 (Core)
3.10.0-957.1.3.el7.x86_64
Compiler: C/C++/Fortran : Version 19.10 of PGI Professional Edition
File System: xfs
System State: Run level 3 (add definition here)
Other Software: None

Results Table

<table>
<thead>
<tr>
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<td>34.9</td>
<td>22.4</td>
<td>34.5</td>
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</tr>
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Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The config file option 'submit' was used.
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Platform Notes

Sysinfo program /local/home/cparrott/SPEC/ACCEL-1.3/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3fe1df68447e8a35
running on perf-sky6 Wed Nov 13 00:35:04 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
cautions.)
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: 394870008 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 Oct 6 17:57

SPEC is set to: /local/home/cparrott/SPEC/ACCEL-1.3
Filesystem                         Type  Size  Used Avail Use% Mounted on
/dev/mapper/centos_perf--sky6-root xfs   443G   66G  377G  15% /

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:
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 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
551.ppalm: -DSPEC_USE_INNER_SIMD
552.pep: -DSPEC_USE_INNER_SIMD
553.pclvrleaf: -DSPEC_USE_INNER_SIMD
554.pcg: -DSPEC_USE_INNER_SIMD

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**Base Optimization Flags**

**C benchmarks:**
- -fast -Mfprelaxed -Mhugetlb -Mnouniform -mp=nvomp

**Fortran benchmarks:**
- -fast -Mfprelaxed -Mhugetlb -Mnouniform -mp=nvomp

** Benchmarks using both Fortran and C:**
- 553.pclvrleaf: -fast -Mfprelaxed -Mhugetlb -Mnouniform -mp=nvomp
- 559.pmniGhost: -fast -Mfprelaxed -Mhugetlb -Mnouniform -mp=nvomp -Mnomain

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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 v1.3. Report generated on Wed Nov 13 01:59:01 2019 by SPEC ACCEL PS/PDF formatter v2947.