## SPEC ACCEL™ ACC Result

**Supermicro**  
(Test Sponsor: NVIDIA Corporation)  

**NVIDIA Tesla V100-PCIE-16GB**  
SuperServer 1029Q-TRT

### SPECaccel_acc_peak = Not Run

### SPECaccel_acc_base = 12.8

<table>
<thead>
<tr>
<th>Test Date:</th>
<th>Hardware Availability:</th>
<th>Software Availability:</th>
</tr>
</thead>
</table>

#### Benchmarks

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>SPECaccel_acc_base = 12.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>303.ostencil</td>
<td>16.8</td>
</tr>
<tr>
<td>304.olbm</td>
<td>12.5</td>
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<tr>
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<td>10.6</td>
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<td>351.palm</td>
<td>3.47</td>
</tr>
<tr>
<td>352.ep</td>
<td>25.6</td>
</tr>
<tr>
<td>353.clvrleaf</td>
<td>25.0</td>
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<tr>
<td>354.cg</td>
<td>13.6</td>
</tr>
<tr>
<td>355.seismic</td>
<td>15.0</td>
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<tr>
<td>356.sp</td>
<td>13.0</td>
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<tr>
<td>357.csp</td>
<td>14.3</td>
</tr>
<tr>
<td>359.miniGhost</td>
<td>11.5</td>
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<tr>
<td>360.ilbdc</td>
<td>13.0</td>
</tr>
<tr>
<td>363.swim</td>
<td>4.19</td>
</tr>
<tr>
<td>370.bt</td>
<td>25.5</td>
</tr>
</tbody>
</table>

### CPU

- **Name:** Intel Xeon Gold 6148  
- **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

- **Model Name:** Tesla V100  
- **Vendor:** NVIDIA  
- **Name:** NVIDIA Tesla V100-PCIE-16GB  
- **Type of Accel:** GPU  
- **Connection:** PCIe  
- **Does Accel Use ECC:** Yes  
- **Driver:** NVIDIA UNIX x86_64 Kernel Module 418.87.00

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**SPEC ACCEL ACC Result**

Supermicro
(Test Sponsor: NVIDIA Corporation)

NVIDIA Tesla V100-PCIE-16GB
SuperServer 1029Q-TRT

<table>
<thead>
<tr>
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<td>Test sponsor</td>
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</tr>
<tr>
<td>Tested by</td>
<td>NVIDIA Corporation</td>
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</table>

**SPECaccel_acc_peak = Not Run**

**SPECaccel_acc_base = 12.8**

### Hardware (Continued)

<table>
<thead>
<tr>
<th>Memory</th>
<th>384 GB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional info</td>
<td>376.577 GB fixme: If using DDR3, format is: 'N GB (M x N GB nRxN PCn-nmmnR-n, ECC)'</td>
</tr>
<tr>
<td>Disk Subsystem</td>
<td>443 GB</td>
</tr>
<tr>
<td>Other Hardware</td>
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</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Operating System</th>
<th>CentOS Linux release 7.6.1810 (Core)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compiler</td>
<td>C/C++/Fortran : Version 19.10 of PGI Professional Edition</td>
</tr>
<tr>
<td>File System</td>
<td>xfs</td>
</tr>
<tr>
<td>System State</td>
<td>Run level 3 (add definition here)</td>
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<tr>
<td>Other Software</td>
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### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<td>8.60</td>
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</tbody>
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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.
SPEC ACCEL ACC Result

Supermicro
(Test Sponsor: NVIDIA Corporation)

NVIDIA Tesla V100-PCIE-16GB
SuperServer 1029Q-TRT

SPECaccel_acc_peak = Not Run
SPECaccel_acc_base = 12.8

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

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 17:32:09 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: 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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NVIDIA Tesla V100-PCIE-16GB
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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   67G  376G  16% /

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"

Base Compiler Invocation

C benchmarks:
pgcc

Fortran benchmarks:
pgfortran

Benchmarks using both Fortran and C:
pgcc pgfortran

Base Optimization Flags

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

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

Benchmarks using both Fortran and C:
353.clvrleaf: -fast -Mfprelaxed -Mhugetlb -Mnouniform -acc -ta=tesla

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**Base Optimization Flags (Continued)**

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