**SPEC ACCEL™ ACC Result**

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

**Intel Xeon E5-2698 v3**  
**SuperServer 1028GR-TR**

<table>
<thead>
<tr>
<th>Test Date: May-2017</th>
<th>SPECaccel_acc_peak = 1.81</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor: NVIDIA Corporation</td>
<td></td>
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<tr>
<td>Hardware Availability: Oct-2015</td>
<td></td>
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<tr>
<td>Tested by: NVIDIA Corporation</td>
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**303.ostencil**  
**304.olbm**  
**314.omriq**  
**350.md**  
**351.palm**  
**352.ep**  
**353.clvrleaf**  
**354.cg**  
**355.seismic**  
**356.sp**  
**357.csp**  
**359.miniGhost**  
**360.ilbdc**  
**363.swim**  
**370.bt**

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**Hardware**

- **CPU Name:** Intel Xeon E5-2698 v3  
- **CPU Characteristics:**
  - CPU MHz: 2300  
  - CPU MHz Maximum: 3600  
- **FPU:** Integrated  
- **CPU(s) enabled:** 32 cores, 2 chips, 16 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:** 256 KB I+D on chip per core  
- **L3 Cache:** 40 MB I+D on chip per chip  
- **Other Cache:** None

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**Accelerator**

- **Accel Model Name:** Intel Xeon E5-2698 v3  
- **Accel Vendor:** Intel Corporation  
- **Accel Name:** Intel Xeon E5-2698 v3  
- **Type of Accel:** CPU  
- **Accel Connection:** N/A  
- **Does Accel Use ECC:** Yes  
- **Accel Description:** See Notes  
- **Accel Driver:** None
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**Hardware (Continued)**

| Memory: | 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R) |
| Disk Subsystem: | 500 GB Seagate ST9500620NS 7200 RPM SATA |
| Other Hardware: | None |

**Software**

Operating System: CentOS Linux release 7.2.1511 (Core)  
3.10.0-327.22.2.el7.x86_64  
File System: xfs  
System State: Run level 3 (multi-user)  
Other Software: None

**Results Table**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base</th>
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<th></th>
<th></th>
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<td>1.58</td>
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</tr>
</tbody>
</table>

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

**Operating System Notes**

Stacksize set to 'unlimited'
Supermicro
(Test Sponsor: NVIDIA Corporation)

Intel Xeon E5-2698 v3
SuperServer 1028GR-TR

SPECCaccel_acc_peak = 1.81
SPECCaccel_acc_base = 1.81

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

Platform Notes

Sysinfo program /local/home/colgrove/SPECACCEL/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3fe1df68447e8a35
running on hsw8 Fri May 12 14:35:24 2017

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 E5-2698 v3 @ 2.30GHz
- 2 "physical id"s (chips)
- 64 "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: 16
  - siblings: 32
  - physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
  - physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
- cache size: 40960 KB

From /proc/meminfo
- MemTotal: 264038532 kB
- HugePages_Total: 20
- Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
- CentOS Linux release 7.2.1511 (Core)

From /etc/*release* /etc/*version*
- centos-release: CentOS Linux release 7.2.1511 (Core)
- centos-release-upstream: Derived from Red Hat Enterprise Linux 7.2 (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 7.2.1511 (Core)
- system-release: CentOS Linux release 7.2.1511 (Core)
- system-release-cpe: cpe:/o:centos:centos:7

uname -a:
- Linux hsw8 3.10.0-327.22.2.e17.x86_64 #1 SMP Thu Jun 23 17:05:11 UTC 2016
  x86_64 x86_64 x86_64 GNU/Linux
Supermicro  
(Test Sponsor: NVIDIA Corporation) 
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Test date: May-2017  
Hardware Availability: Oct-2015  
Software Availability: May-2017

Platform Notes (Continued)

run-level 3 May 12 08:57
SPEC is set to: /local/home/colgrove/SPECACCEL
Filesystem          Type  Size  Used  Avail  Use% Mounted on
/dev/mapper/centos-root  xfs   443G   31G  413G   7% /

Cannot run dmidecode; consider saying 'chmod +s /usr/sbin/dmidecode'

(End of data from sysinfo program)

Accelerator Description as output from pgcpuid
vendor id       : GenuineIntel
model name      : Intel(R) Xeon(R) CPU E5-2698 v3 @ 2.30GHz
cpu family      : 6
model           : 63
name            : Haswell
stepping        : 2
processors      : 64
threads         : 2
clflush size    : 8
L2 cache size   : 256KB
L3 cache size   : 40960KB
flags           : acpi aes apic avx avx2 cflush cmov cpuid cx8 cx16 de dti
des
flags           : ferr fma fpu fxsr ht lm mca mce mmx monitor msr mtrr nx
flags           : osxsave pae pat pdcm pge popcnt pse pseg36 selfsnoop
flags           : speedstep sep sse sse2 sse3 sse4.1 sse4.2 syscall tm
flags           : tm2 tsc vme xsave xtop

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

Continued on next page
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Base Optimization Flags (Continued)

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`

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.ibdce: `basepeak = yes`
363.swim: `basepeak = yes`

Benchmarks using both Fortran and C:
353.clvrleaf: `basepeak = yes`
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Peak Optimization Flags (Continued)

359.miniGhost: basepeak = yes

The flags file that was used to format this result can be browsed at
https://www.spec.org/accel/flags/pgi2017_flags.20170621.00.html

You can also download the XML flags source by saving the following link:
https://www.spec.org/accel/flags/pgi2017_flags.20170621.00.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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