# SPEC® ACCEL_ACC Result

**Cray**  
(Test Sponsor: Indiana University)  
**NVIDIA Tesla K20**  
Cray XK7

## SPECaccel_acc_peak = Not Run

## SPECaccel_acc_base = 1.77

<table>
<thead>
<tr>
<th>Test date:</th>
<th>Aug-2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test sponsor:</td>
<td>Indiana University</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Indiana University</td>
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<table>
<thead>
<tr>
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<tr>
<td>303.ostencil</td>
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<tr>
<td>304.olbm</td>
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### Hardware

- **CPU Name:** AMD Opteron 6276  
- **CPU Characteristics:** AMD Turbo CORE Technology up to 3.2GHz, Turbo CORE off  
- **CPU MHz:** 2300  
- **CPU MHz Maximum:** 3200  
- **FPU:** Integrated  
- **CPU(s) enabled:** 16 cores, 1 chip, 16 cores/chip  
- **CPU(s) orderable:** 1 chip  
- **Primary Cache:** 32 KB I + 16 KB D on chip per core  
- **Secondary Cache:** 16 MB I+D on chip per chip, 2 MB shared / 2 cores  
- **L3 Cache:** 16 MB I+D on chip per chip, 8 MB shared / 8 cores

### Accelerator

- **Accel Model Name:** Tesla K20  
- **Accel Vendor:** NVIDIA  
- **Accel Name:** NVIDIA Tesla K20  
- **Type of Accel:** GPU  
- **Accel Connection:** PCIe 2.0 16x  
- **Does Accel Use ECC:** yes  
- **Accel Description:** NVIDIA Tesla K20m GPU, 2496 CUDA cores, 706MHz, 5 GB GDDR5 RAM  
- **Accel Driver:** NVIDIA UNIX x86_64 Kernel Module 319.82
## SPEC ACCEL_ACC Result

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### ACCEL license: 3440A

### Test sponsor: Indiana University

### Tested by: Indiana University

### Test date: Aug-2014

### Hardware Availability: Apr-2013

### Software Availability: Feb-2014

### Other Cache: None

### Memory: 32 GB (4 x 8 GB 2Rx4 PC3L-12800R-11, ECC)

### Disk Subsystem: None

### Other Hardware: None

### Operating System:
- SUSE Linux Enterprise Server 11 (x86_64), Cray Linux Environment 4.2
- SUSE Linux Enterprise Server 11 (x86_64) 2.6.32.59-0.7.1_1.0402.7496-cray_gem_c

### Compiler:
- PGI Accelerator Fortran/C/C++ Server, Release 14.3

### File System:
- NFSv3 (IBM N5500 NAS) over Gb ethernet

### System State:
- Multi-user, run level 3

### Other Software:
- NVIDIA CUDA 5.5.20
**SPEC ACCEL_ACC Result**

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

**Platform Notes**

Sysinfo program /N/soft/mason/specaccel-1.0/Docs/sysinfo
$Rev: 6874 $ $Date:: 2013-11-20 #$ 0953404ef7e75a5f9bbb534c6de3f831
running on nid00696 Mon Aug 18 10:00:38 2014

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 : AMD Opteron(TM) Processor 6276
  1 "physical id"s (chips)
  16 "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 : 16
physical 0: cores 0 1 2 3 4 5 6 7
cache size : 2048 KB

From /proc/meminfo
Continued on next page
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Platform Notes (Continued)

MemTotal: 33084584 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 11 (x86_64)

From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 11 (x86_64)
VERSION = 11
PATCHLEVEL = 1
mazama-release:
Mazama Wed Aug 28 02:06:30 CDT 2013 on hssbld0 by bwdev
lsb-cray-mazama-7.1.0

uname -a:
Linux nid00696 2.6.32.59-0.7.1_1.0402.7496-cray_gem_c #1 SMP Wed Feb 26
05:58:57 UTC 2014 x86_64 x86_64 x86_64 GNU/Linux

SPEC is set to: /N/soft/mason/specaccel-1.0
Filesystem Type Size Used Avail Use% Mounted on
/N/soft dvs 1.9T 1.6T 265G 86% /N/soft

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

(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=tesla:cc35 -ta=tesla:cuda5.5

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Base Optimization Flags (Continued)

Fortran benchmarks:
   -fast -Mfprelaxed -acc -ta=tesla:cc35 -ta=tesla:cuda5.5

Benchmarks using both Fortran and C:

  353.clvrleaf: -fast -Mfprelaxed -acc -ta=tesla:cc35 -ta=tesla:cuda5.5
  359.miniGhost: -fast -Mfprelaxed -acc -ta=tesla:cc35 -ta=tesla:cuda5.5  
               -Mnomain

The flags file that was used to format this result can be browsed at
http://www.spec.org/accel/flags/pgi2014_flags.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/accel/flags/pgi2014_flags.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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