### Bull

(Test Sponsor: Technische Universität Dresden)

NVIDIA Tesla K80

**Bull R400**

<table>
<thead>
<tr>
<th>SPECaccel_acc_peak = Not Run</th>
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**ACCEL license:** 37A  
**Test sponsor:** Technische Universität Dresden

**Test date:** Sep-2015  
**Hardware Availability:** Jan-2015

**Tested by:** Technische Universität Dresden  
**Software Availability:** May-2015

<table>
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<th>Benchmark</th>
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**SPECCaccel_acc_base = 2.18**

**Hardware**

- **CPU Name:** Intel Xeon E5-2680 v3
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.30 GHz
- **CPU MHz:** 2500
- **CPU MHz Maximum:** 3300
- **FPU:** Integrated
- **CPU(s) enabled:** 24 cores, 2 chips, 12 cores/chip
- **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:** 30 MB I+D on chip per chip
- **Other Cache:** None

**Accelerator**

- **Accel Model Name:** Tesla K80
- **Accel Vendor:** NVIDIA
- **Accel Name:** NVIDIA Tesla K80
- **Type of Accel:** GPU
- **Accel Connection:** PCIe 2.0 16x
- **Does Accel Use ECC:** yes
- **Accel Description:** NVIDIA Tesla K80, Kepler GK210, 2496 CUDA cores 12 GB GDDR5 RAM (Kepler Generation)
- **Accel Driver:** NVIDIA UNIX x86_64 Kernel Module 346.46

Continued on next page
SPEC ACCEL ACC Result

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NVIDIA Tesla K80
Bull R400

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Test date: Sep-2015
Hardware Availability: Jan-2015
Software Availability: May-2015

Hardware (Continued)
Memory: 64 GB (8 x 8 GB 2Rx8 PC4-2133P-R)
Disk Subsystem: 62 GB SSD
Other Hardware: --

Software
Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago) 2.6.32-504.12.2.el6.x86_64
Compiler: PGI Accelerator Server Complete, Release 15.5
File System: ext4
System State: Run level 3 (Multi-User)
Other Software: NVIDIA Cuda SDK 7.0, driver version 346.46

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base</th>
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Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Platform Notes

MultiThreading disabled in BIOS
Sysinfo program /tmp/spec-accel/Docs/sysinfo
$Rev: 6874 $ $Date:: 2013-11-20 $$ 0953404ef7e75a5f9bbb534c6de3f831
running on taurusi2058 Mon Sep 14 17:28:10 2015

This section contains SUT (System Under Test) info as seen by
Continued on next page
SPEC ACCEL ACC Result

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Platform Notes (Continued)

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 E5-2680 v3 @ 2.50GHz
2 "physical id"s (chips)
24 "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 : 12
siblings : 12
physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13

From /proc/meminfo
MemTotal: 65868116 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)

uname -a:
Linux taurusi2058 2.6.32-504.12.2.el6.x86_64 #1 SMP Sun Feb 1 12:14:02 EST
2015 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jul 8 14:37

SPEC is set to: /tmp/spec-accel

Filesystem Type Size Used Avail Use% Mounted on
/dev/sda3 ext4 62G 2.9G 56G 5% /tmp

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

(End of data from sysinfo program)

Base Compiler Invocation

C benchmarks:
pgcc

Continued on next page
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Base Compiler Invocation (Continued)

Fortran benchmarks:
   pgfortran

Benchmarks using both Fortran and C:
   pgcc pgfortran

Base Optimization Flags

C benchmarks:
   -V15.5 -fast -Mfprelaxed -acc -ta=tesla:cc35 -ta=tesla:cuda7.0
   -tp=haswell-64

Fortran benchmarks:
   -V15.5 -fast -Mfprelaxed -acc -ta=tesla:cc35 -ta=tesla:cuda7.0
   -tp=haswell-64

Benchmarks using both Fortran and C:
   353.clvrleaf: -V15.5 -fast -Mfprelaxed -acc -ta=tesla:cc35
   -ta=tesla:cuda7.0 -tp=haswell-64
   359.miniGhost: -V15.5 -fast -Mfprelaxed -acc -ta=tesla:cc35
   -ta=tesla:cuda7.0 -tp=haswell-64 -Mnomain

The flags file that was used to format this result can be browsed at

You can also download the XML flags source by saving the following link:
http://www.spec.org/accel/flags/pgi2014_flags.20150930.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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