



# SPEC ACCEL™ ACC Result

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## Bull

(Test Sponsor: Technische Universitaet Dresden)

# NVIDIA Tesla K80

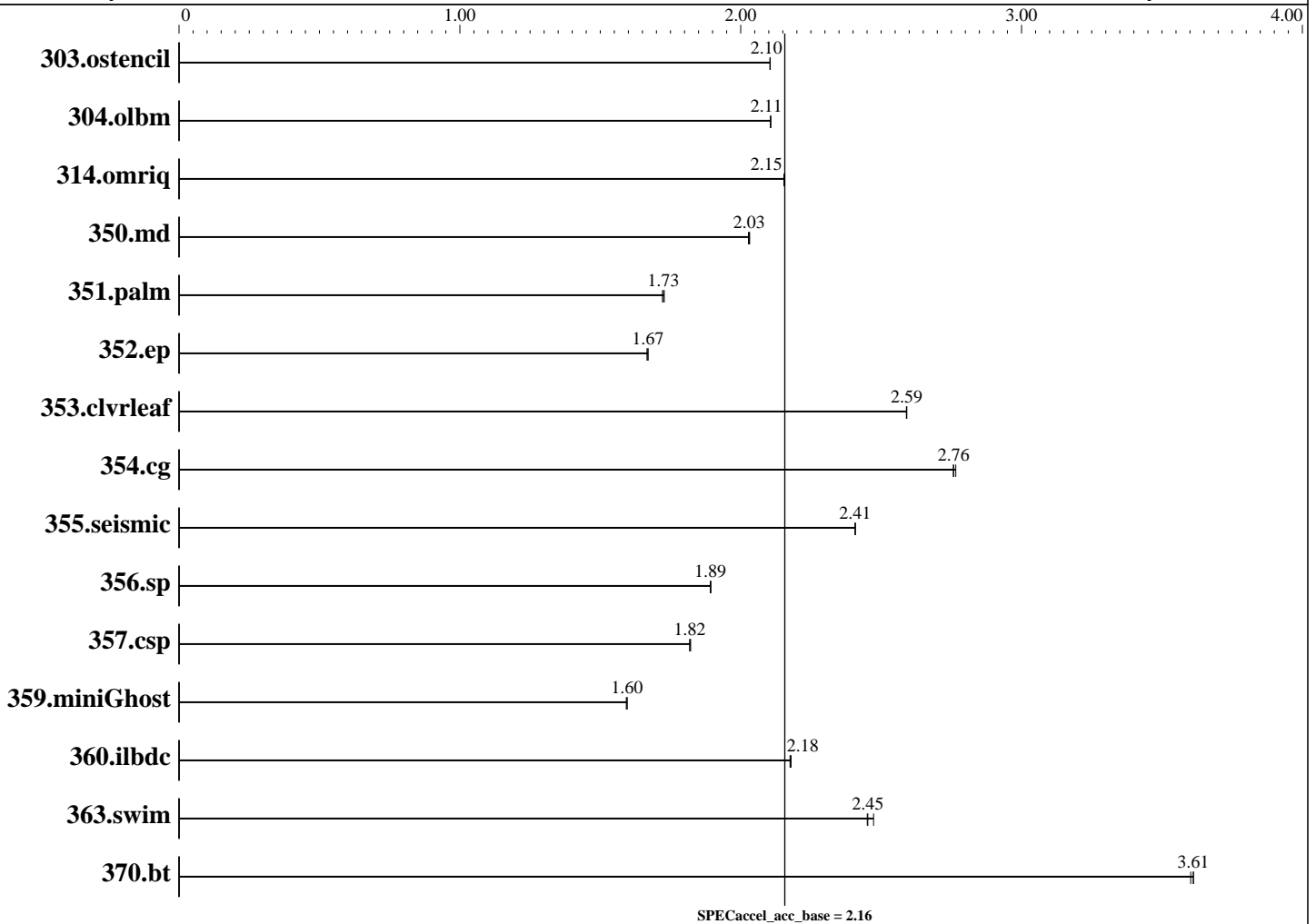
# Bull R400

SPECaccel\_acc\_peak = Not Run

SPECaccel\_acc\_base = 2.16

ACCEL license: 37A  
Test sponsor: Technische Universitaet Dresden  
Tested by: Technische Universitaet Dresden

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



### Hardware

CPU Name: Intel Xeon E5-2680 v3  
 CPU Characteristics: Intel Turbo Boost Technology up tp 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

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### 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, 875 MHz, 12 GB GDDR5 RAM (Kepler Generation)  
 Accel Driver: NVIDIA UNIX x86\_64 Kernel Module 346.46



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### Hardware (Continued)

Memory: 64 GB (8 x 8 GB 2Rx8 PC4-2133R-10)  
Disk Subsystem: 62 GB SSD  
Other Hardware: --

### Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)  
Red Hat Enterprise Linux Server release 6.4 (Santiago)  
2.6.32-504.12.2.el6.x86\_64  
Compiler: PGI Accelerator Server Complete, Release 15.7  
File System: ext4  
System State: Run Level 3 (Multi-User)  
Other Software: NVIDIA CUDA SDK 7.0, driver version 346.46

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
303.ostencil	<b>68.9</b>	<b>2.10</b>	68.9	2.10	68.9	2.11						
304.olbm	<b>216</b>	<b>2.11</b>	216	2.11	216	2.11						
314.omriq	443	2.16	444	2.15	<b>444</b>	<b>2.15</b>						
350.md	<b>124</b>	<b>2.03</b>	124	2.03	124	2.03						
351.palm	<b>214</b>	<b>1.73</b>	214	1.73	215	1.72						
352.ep	318	1.67	<b>317</b>	<b>1.67</b>	317	1.67						
353.clvleaf	<b>172</b>	<b>2.59</b>	172	2.59	172	2.59						
354.cg	148	2.76	<b>148</b>	<b>2.76</b>	148	2.77						
355.seismic	154	2.41	<b>154</b>	<b>2.41</b>	154	2.41						
356.sp	146	1.89	146	1.89	<b>146</b>	<b>1.89</b>						
357.csp	148	1.82	<b>148</b>	<b>1.82</b>	148	1.82						
359.miniGhost	232	1.59	231	1.60	<b>231</b>	<b>1.60</b>						
360.ilbdc	169	2.18	168	2.18	<b>169</b>	<b>2.18</b>						
363.swim	93.0	2.47	<b>93.8</b>	<b>2.45</b>	93.9	2.45						
370.bt	<b>61.8</b>	<b>3.61</b>	61.7	3.61	61.9	3.60						

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/1.1/Docs/sysinfo  
\$Rev: 6965 \$ \$Date:: 2015-04-21 #\$ c05a7f14b1b1765e3fe1df68447e8a35  
running on taurusi2059 Wed Sep 16 16:39:01 2015

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## Platform Notes (Continued)

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 E5-2680 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
caution.)
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
cache size : 30720 KB
```

```
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)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux taurusi2059 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 14:35
```

```
SPEC is set to: /tmp/spec-accel/1.1
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3       ext4  62G  4.2G  55G   8% /tmp
```

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

(End of data from sysinfo program)



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## Base Compiler Invocation

C benchmarks:  
pgcc

Fortran benchmarks:  
pgfortran

Benchmarks using both Fortran and C:  
pgcc pgfortran

## Base Optimization Flags

C benchmarks:  
-V15.7 -fast -acc -ta=tesla:cc35 -ta=tesla:cuda7.0 -tp=haswell-64

Fortran benchmarks:  
-V15.7 -fast -acc -ta=tesla:cc35 -ta=tesla:cuda7.0 -tp=haswell-64

Benchmarks using both Fortran and C:  
  
353.clvrfleaf: -V15.7 -fast -acc -ta=tesla:cc35 -ta=tesla:cuda7.0  
-tp=haswell-64  
  
359.miniGhost: -V15.7 -fast -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  
[http://www.spec.org/accel/flags/pgi2014\\_flags.20150930.html](http://www.spec.org/accel/flags/pgi2014_flags.20150930.html)

You can also download the XML flags source by saving the following link:  
[http://www.spec.org/accel/flags/pgi2014\\_flags.20150930.xml](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](mailto:webmaster@spec.org).

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