

SPEC ACCEL™ ACC Result

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AMD

(Test Sponsor: NVIDIA Corporation)

NVIDIA Tesla V100-PCIE-16GB
Engineering Sample

SPECaccel_acc_peak = Not Run

SPECaccel_acc_base = 12.8

ACCEL license: 019

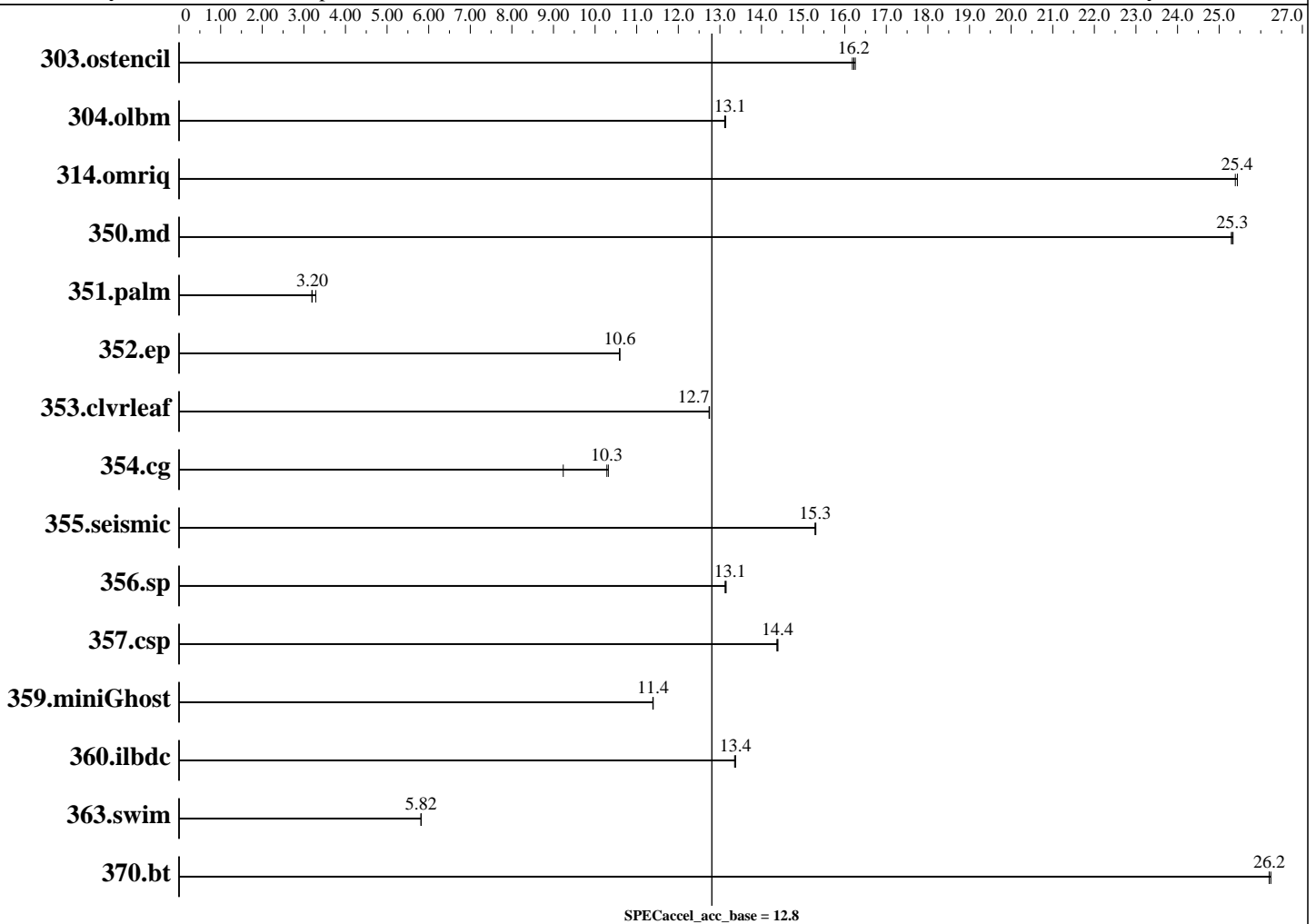
Test sponsor: NVIDIA Corporation

Tested by: NVIDIA Corporation

Test date: Nov-2019

Hardware Availability: Jul-2019

Software Availability: Nov-2019



Hardware

CPU Name: AMD EPYC 7352 24-Core
CPU Characteristics: --
CPU MHz: --
CPU MHz Maximum: 3200
FPU: --
CPU(s) enabled: 48 cores, 2 chips, 24 cores/chip, 2 threads/core
CPU(s) orderable: 1-2 chips
Primary Cache: 24 KB I + 24 KB D on chip per core
Secondary Cache: 512 KB I+D on chip per core
L3 Cache: 128 MB I+D on chip per chip
Other Cache: None

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Accelerator

Accel Model Name: Tesla V100
Accel Vendor: NVIDIA
Accel Name: NVIDIA Tesla V100-PCIE-16GB
Type of Accel: GPU
Accel Connection: PCIe
Does Accel Use ECC: Yes
Accel Description: --
Accel Driver: NVIDIA UNIX x86_64 Kernel Module 418.97

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Hardware (Continued)

Memory: 256 GB
251.769 GB fixme: If using DDR3, format is:
'N GB (M x N GB nRxN PCn-nnnnnR-n, ECC)'
Disk Subsystem: 219 GB add more disk info here
Other Hardware: None

Software

Operating System: Ubuntu 18.04.3 LTS
Ubuntu 18.04.3 LTS
5.2.0-8-generic
Compiler: C/C++/Fortran : Version 19.10 of PGI Professional
Edition
File System: ext4
System State: Run level 5 (add definition here)
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
303.ostencil	8.96	16.2	8.92	16.3	8.94	16.2						
304.olbm	34.7	13.1	34.6	13.1	34.7	13.1						
314.omriq	37.6	25.4	37.7	25.4	37.6	25.4						
350.md	9.95	25.3	9.95	25.3	9.96	25.3						
351.palm	113	3.29	116	3.20	116	3.19						
352.ep	50.0	10.6	50.1	10.6	50.0	10.6						
353.clvleaf	34.9	12.8	34.9	12.7	34.9	12.7						
354.cg	39.7	10.3	44.2	9.24	39.5	10.3						
355.seismic	24.2	15.3	24.2	15.3	24.2	15.3						
356.sp	21.0	13.1	21.0	13.2	21.0	13.1						
357.csp	18.8	14.4	18.8	14.4	18.8	14.4						
359.miniGhost	32.4	11.4	32.4	11.4	32.4	11.4						
360.ilbdc	27.5	13.4	27.4	13.4	27.4	13.4						
363.swim	39.5	5.82	39.5	5.82	39.5	5.82						
370.bt	8.51	26.2	8.51	26.2	8.50	26.2						

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.

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Platform Notes

Sysinfo program /local/home/cparrott/SPEC/ACCEL-1.3/Docs/sysinfo
\$Rev: 6965 \$ \$Date:: 2015-04-21 #\$ c05a7f14b1b1765e3feldf68447e8a35
running on romel Thu Nov 14 17:05:22 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 : AMD EPYC 7352 24-Core Processor

2 "physical id"s (chips)

96 "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 : 24

siblings : 48

physical 0: cores 0 1 2 4 5 6 8 9 10 12 13 14 16 17 18 20 21 22 24 25 26
28 29 30

physical 1: cores 0 1 2 4 5 6 8 9 10 12 13 14 16 17 18 20 21 22 24 25 26
28 29 30

cache size : 512 KB

From /proc/meminfo

MemTotal: 263998740 kB

HugePages_Total: 0

Hugepagesize: 2048 kB

/usr/bin/lsb_release -d

Ubuntu 18.04.3 LTS

From /etc/*release* /etc/*version*

debian_version: buster/sid

dgx-release:

DGX_NAME="DGX Server"

DGX_PRETTY_NAME="NVIDIA DGX Server"

DGX_SWBUILD_DATE="2019-09-25"

DGX_SWBUILD_VERSION="4.99.1"

DGX_COMMIT_ID="1519feb"

DGX_PLATFORM="DGX Server for DAYTONA_X"

DGX_SERIAL_NUMBER="To be filled by O.E.M."

os-release:

NAME="Ubuntu"

VERSION="18.04.3 LTS (Bionic Beaver)"

ID=ubuntu

ID_LIKE=debian

PRETTY_NAME="Ubuntu 18.04.3 LTS"

VERSION_ID="18.04"

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Platform Notes (Continued)

HOME_URL="https://www.ubuntu.com/"

SUPPORT_URL="https://help.ubuntu.com/"

uname -a:

```
Linux romel 5.2.0-8-generic #9-Ubuntu SMP Mon Jul 8 13:07:27 UTC 2019 x86_64  
x86_64 x86_64 GNU/Linux
```

run-level 5 Nov 14 11:38

SPEC is set to: /local/home/cparrott/SPEC/ACCEL-1.3

```
Filesystem      Type      Size      Used Avail Use% Mounted on  
/dev/sda2       ext4      219G      46G  162G  22% /
```

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 -Mnouniform -Mhugetlb -acc -ta=tesla

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Base Optimization Flags (Continued)

Fortran benchmarks:

-fast -Mfprelaxed -Mnouniform -Mhugetlb -acc -ta=tesla

Benchmarks using both Fortran and C:

353.civrleaf: -fast -Mfprelaxed -Mnouniform -Mhugetlb -acc -ta=tesla

359.miniGhost: -fast -Mfprelaxed -Mnouniform -Mhugetlb -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.
Report generated on Thu Nov 14 17:42:10 2019 by SPEC ACCEL PS/PDF formatter v2947.