

SPEC ACCEL™ OMP Result

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AMD

(Test Sponsor: NVIDIA Corporation)

AMD EPYC 7352

Engineering Sample

SPECaccel_omp_peak = Not Run

SPECaccel_omp_base = 5.25

ACCEL license: 019

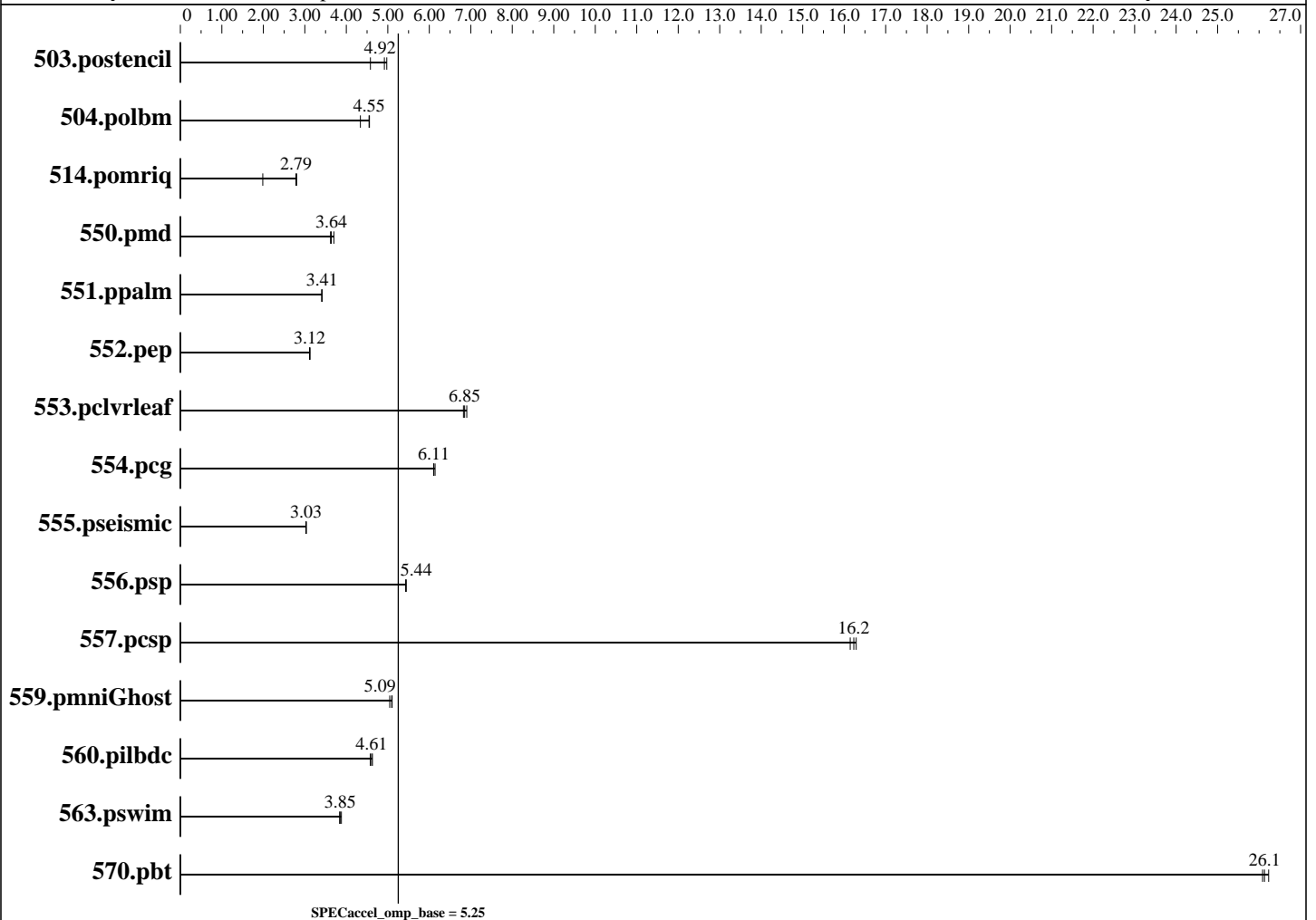
Test sponsor: NVIDIA Corporation

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: 2300
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: 32 KB I + 32 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: EPYC 7352
Accel Vendor: AMD
Accel Name: AMD EPYC 7352
Type of Accel: CPU
Accel Connection: Not applicable
Does Accel Use ECC: Yes
Accel Description: --
Accel Driver: --

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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
503.postencil	21.9	4.98	<u>22.2</u>	<u>4.92</u>	23.8	4.58						
504.polbm	28.1	4.34	<u>26.8</u>	<u>4.55</u>	26.8	4.56						
514.pomriq	313	1.99	<u>223</u>	<u>2.79</u>	222	2.80						
550.pmd	66.6	3.62	<u>66.3</u>	<u>3.64</u>	65.1	3.70						
551.ppalm	159	3.41	<u>159</u>	<u>3.41</u>	160	3.41						
552.pep	<u>74.1</u>	<u>3.12</u>	73.9	3.13	74.2	3.11						
553.pclvrleaf	168	6.82	166	6.90	<u>167</u>	<u>6.85</u>						
554.pcg	<u>54.5</u>	<u>6.11</u>	54.5	6.11	54.2	6.14						
555.pseismic	<u>93.0</u>	<u>3.03</u>	93.2	3.03	92.9	3.04						
556.psp	151	5.43	150	5.44	<u>150</u>	<u>5.44</u>						
557.pcsp	<u>52.9</u>	<u>16.2</u>	53.2	16.1	52.7	16.3						
559.pmniGhost	78.7	5.05	77.8	5.10	<u>77.9</u>	<u>5.09</u>						
560.pilbdc	<u>142</u>	<u>4.61</u>	141	4.63	143	4.58						
563.pswim	41.4	3.84	<u>41.3</u>	<u>3.85</u>	41.0	3.88						
570.pbt	<u>29.9</u>	<u>26.1</u>	29.9	26.1	29.7	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 Wed Nov 13 13:29:45 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 Oct 15 14:16

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

```
Filesystem      Type  Size  Used Avail Use% Mounted on  
/dev/sda2      ext4  219G   37G  171G  18% /
```

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"

OMP_PROC_BIND = "true"

Base Compiler Invocation

C benchmarks:

pgcc

Fortran benchmarks:

pgfortran

Benchmarks using both Fortran and C:

pgcc pgfortran

Base Portability Flags

503.postencil: -DSPEC_USE_INNER_SIMD

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Base Portability Flags (Continued)

504.polbm: -DSPEC_USE_INNER_SIMD
514.pomriq: -DSPEC_USE_INNER_SIMD
550.pmd: -DSPEC_USE_INNER_SIMD
551.ppalm: -DSPEC_USE_INNER_SIMD
552.pep: -DSPEC_USE_INNER_SIMD
553.pclvrleaf: -DSPEC_USE_INNER_SIMD
554.pcg: -DSPEC_USE_INNER_SIMD
555.pseismic: -DSPEC_USE_INNER_SIMD
556.psp: -DSPEC_USE_INNER_SIMD
557.pcsp: -DSPEC_USE_INNER_SIMD
559.pmniGhost: -DSPEC_USE_INNER_SIMD
560.pilbdc: -DSPEC_USE_INNER_SIMD
563.pswim: -DSPEC_USE_INNER_SIMD
570.pbt: -DSPEC_USE_INNER_SIMD

Base Optimization Flags

C benchmarks:

-fast -Mhugetlb -Mnouniform -mp=nvomp

Fortran benchmarks:

-fast -Mhugetlb -Mnouniform -mp=nvomp

Benchmarks using both Fortran and C:

553.pclvrleaf: -fast -Mhugetlb -Mnouniform -mp=nvomp

559.pmniGhost: -fast -Mhugetlb -Mnouniform -mp=nvomp -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.
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