SPEC ACCEL™ OMP Result

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

Hardware
CPU Name: AMD EPYC 7352 24-Core
CPU Characteristics: 24 cores, 2 threads/core, 128 MB L3 cache
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

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: --
AMD
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Hardware

Memory: 256 GB
Disk Subsystem: 219 GB
Other Hardware: None

Software

Operating System: Ubuntu 18.04.3 LTS
Compiler: C/C++/Fortran : Version 19.10 of PGI Professional Edition
File System: ext4
System State: Run level 5
Other Software: None

Results Table

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</table>

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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Tested by: NVIDIA Corporation
Test date: Nov-2019
Hardware Availability: Jul-2019
Software Availability: Nov-2019

Platform Notes

Sysinfo program /local/home/cparrott/SPEC/ACCEL-1.3/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3fe1df68447e8a35
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"
  DGXPRETTY_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 rome1 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

Continued on next page
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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.pcspp: -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.