# SPEC ACCEL™ ACC Result

**AMD**

(Test Sponsor: NVIDIA Corporation)

**NVIDIA Tesla V100-PCIE-16GB Engineering Sample**

<table>
<thead>
<tr>
<th>SPECaccel_acc_base = 12.8</th>
</tr>
</thead>
</table>

## 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

## 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

## SPECaccel acc peak

- Not Run

## SPECaccel acc base

- 12.8

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Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
## AMD
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### NVIDIA Tesla V100-PCIE-16GB
Engineering Sample

**SPECaccel_acc_peak = Not Run**

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<table>
<thead>
<tr>
<th>Hardware (Continued)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Memory:</td>
<td>256 GB</td>
</tr>
<tr>
<td>Disk Subsystem:</td>
<td>219 GB</td>
</tr>
<tr>
<td>Other Hardware:</td>
<td>None</td>
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</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
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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.
## Platform Notes

Sysinfo program /local/home/cparrott/SPEC/ACCEL-1.3/Docs/sysinfo

$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3fe1df68447e8a35
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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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

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 Nov 14 11:38

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

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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Test date: Nov-2019
Hardware Availability: Jul-2019
Software Availability: Nov-2019

Base Optimization Flags (Continued)

Fortran benchmarks:
- fast -Mfprelaxed -Mnouniform -Mhugetlb -acc -ta=tesla

Benchmarks using both Fortran and C:

353.clvrleaf: -fast -Mfprelaxed -Mnouniform -Mhugetlb -acc -ta=tesla
359.miniGhost: -fast -Mfprelaxed -Mnouniform -Mhugetlb -acc -ta=tesla
- Mnomain