SPEC ACCEL™ ACC Result

Lenovo Global Technology

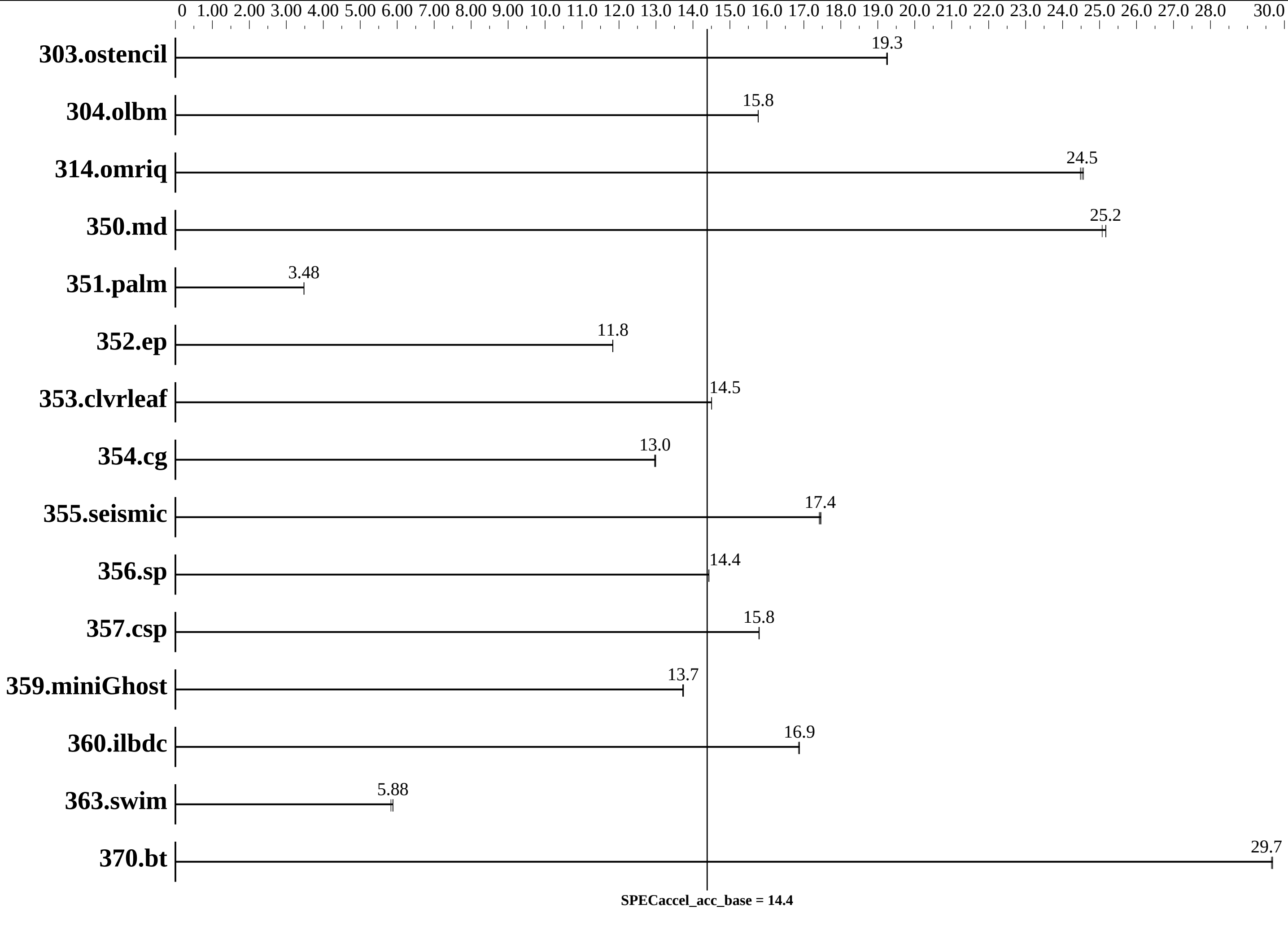
NVIDIA Tesla V100S-PCIE-32GB

ThinkSystem SR665

SPECaccel_acc_peak = Not Run

SPECaccel_acc_base = 14.4

ACCEL license:	28	**Test date:**	Mar-2020
Test sponsor:	Lenovo Global Technology	**Hardware Availability:**	Jun-2020
Tested by:	Lenovo Global Technology	**Software Availability:**	Jun-2020



Hardware

CPU Name:	AMD EPYC 7H12
CPU Characteristics:	Turbo up to 3.3 GHz
CPU MHz:	2600
CPU MHz Maximum:	3300
FPU:	Integrated
CPU(s) enabled:	64 cores, 1 chip, 64 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:	256 MB I+D on chip per chip
Other Cache:	None

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Accelerator

Accel Model Name:	NVIDIA Tesla V100S
Accel Vendor:	NVIDIA Corporation
Accel Name:	NVIDIA Tesla V100S-PCIE-32GB
Type of Accel:	GPU
Accel Connection:	PCIe 3.0 16x
Does Accel Use ECC:	Yes
Accel Description:	NVIDIA Tesla V100S-PCIE-32GB
Accel Driver:	NVIDIA UNIX x86_64 Kernel Module 418.39

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Hardware (Continued)

Memory: 512 GB (8 x 64 GB 2Rx4 PC4-3200AA-R)
Disk Subsystem: 1 x 480 GB 2.5" SSD
Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 15 SP1 4.12.14-195-default
Compiler: PGI Professional Edition, Release 19.9
File System: btrfs
System State: Run level 3
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
303.ostencil	**7.53**	**19.3**	7.53	19.3	7.54	19.2						
304.olbm	28.9	15.8	**28.9**	**15.8**	28.9	15.8						
314.omriq	38.9	24.6	39.1	24.5	**39.0**	**24.5**						
350.md	10.1	25.1	10.0	25.2	**10.0**	**25.2**						
351.palm	106	3.47	106	3.48	**106**	**3.48**						
352.ep	**44.8**	**11.8**	44.8	11.8	44.8	11.8						
353.clvrleaf	30.7	14.5	**30.7**	**14.5**	30.7	14.5						
354.cg	31.4	13.0	**31.4**	**13.0**	31.5	13.0						
355.seismic	21.2	17.4	21.2	17.5	**21.2**	**17.4**						
356.sp	19.1	14.4	19.1	14.4	**19.1**	**14.4**						
357.csp	17.1	15.8	**17.1**	**15.8**	17.1	15.8						
359.miniGhost	26.9	13.7	**26.9**	**13.7**	26.8	13.7						
360.ilbdc	21.7	16.9	21.8	16.9	**21.7**	**16.9**						
363.swim	39.4	5.83	39.1	5.88	**39.1**	**5.88**						
370.bt	7.51	29.7	7.52	29.6	**7.51**	**29.7**						

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Platform Notes

```
Sysinfo program /home/ACCEL1.3/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3fe1df68447e8a35
running on linux-x8nq Fri Mar 27 16:54:35 2020

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
```

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Platform Notes (Continued)

```
From /proc/cpuinfo
   model name : AMD EPYC 7H12 64-Core Processor
      1 "physical id"s (chips)
      64 "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 : 64
      siblings  : 64
      physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
      22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46
      47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63
   cache size : 512 KB

From /proc/meminfo
   MemTotal:       263982732 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

From /etc/*release* /etc/*version*
   os-release:
      NAME="SLES"
      VERSION="15-SP1"
      VERSION_ID="15.1"
      PRETTY_NAME="SUSE Linux Enterprise Server 15 SP1"
      ID="sles"
      ID_LIKE="suse"
      ANSI_COLOR="0;32"
      CPE_NAME="cpe:/o:suse:sles:15:sp1"

uname -a:
   Linux linux-x8nq 4.12.14-195-default #1 SMP Tue May 7 10:55:11 UTC 2019
   (8fba516) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Mar 27 16:10

SPEC is set to: /home/ACCEL1.3
   Filesystem     Type   Size  Used Avail Use% Mounted on
   /dev/sda4      btrfs  444G  142G  302G  32% /home
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.

  BIOS Lenovo D8E105F-1.00 03/19/2020
  Memory:
```

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Platform Notes (Continued)

```
    8x Samsung M393A4G43AB3-CWE 32 kB 2 rank 3200 MT/s
    8x Unknown Unknown

 (End of data from sysinfo program)
```

Base Compiler Invocation

C benchmarks:
`pgcc`

Fortran benchmarks:
`pgfortran`

Benchmarks using both Fortran and C:
`pgcc pgfortran`

Base Optimization Flags

C benchmarks:
`-fast -Mfprelaxed -acc -ta=tesla:cc70 -ta=tesla:cuda10.1`

Fortran benchmarks:
`-fast -Mfprelaxed -acc -ta=tesla:cc70 -ta=tesla:cuda10.1`

Benchmarks using both Fortran and C:

353.clvrleaf: `-fast -Mfprelaxed -acc -ta=tesla:cc70 -ta=tesla:cuda10.1`

359.miniGhost: `-fast -Mfprelaxed -acc -ta=tesla:cc70 -ta=tesla:cuda10.1 -Mnomain`

The flags file that was used to format this result can be browsed at
https://www.spec.org/accel/flags/pgi_flags.20200506.html

You can also download the XML flags source by saving the following link:
https://www.spec.org/accel/flags/pgi_flags.20200506.xml

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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