## SPEC ACCEL™ ACC Result

**Lenovo Global Technology**  
**NVIDIA Tesla V100S-PCIE-32GB**  
**ThinkSystem SR665**

### SPECaccel_acc_base = 14.4

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Result</th>
</tr>
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<tbody>
<tr>
<td>303.ostencil</td>
<td>19.4</td>
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<td>304.olbm</td>
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</tr>
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<td>5.81</td>
</tr>
<tr>
<td>370.bt</td>
<td>29.6</td>
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</table>

### 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:** 128 cores, 2 chips, 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

### 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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Standard Performance Evaluation Corporation  
info@spec.org  
http://www.spec.org/  
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SPECaccel_acc_peak = Not Run
SPECaccel_acc_base = 14.4

ACCEL license: 28
Test sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Test date: Apr-2020
Hardware Availability: Jun-2020
Software Availability: Jun-2020

Hardware (Continued)
Memory: 1 TB (16 x 64 GB 2Rx4 PC4-3200AA-R)
Disk Subsystem: 1 x 480 GB 2.5" SSD
Other Hardware: None

Software
File System: btrfs
System State: Run level 3
Other Software: None

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base</th>
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</tr>
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<tbody>
<tr>
<td></td>
<td>Seconds</td>
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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-x86q Wed Apr 15 13:10:00 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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**SPECaccel\_acc\_peak = Not Run**

**SPECaccel\_acc\_base = 14.4**

**Platform Notes (Continued)**

From `/proc/cpuinfo`

```
model name : AMD EPYC 7H12 64-Core Processor
  2 "physical id"s (chips)
  128 "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
physical 1: 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:       1056689296 kB
HugePages_Total:       0
Hugepagesize:       2048 kB
```

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

```
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 Apr 15 12:46
```

SPEC is set to: `/home/ACCEL1.3`

**Filesystem Type Size Used Avail Use% Mounted on**

```
/dev/sda4 btrfs 444G 160G 284G 37% /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.
```

Continued on next page
### SPEC ACCEL ACC Result

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NVIDIA Tesla V100S-PCIE-32GB  
ThinkSystem SR665

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#### Platform Notes (Continued)

BIOS Lenovo D8E105F-1.00 03/19/2020  
Memory:  
16x Samsung M393A8G40AB2-CWE 64 kB 2 rank 3200 MT/s  
16x 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

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

Tested with SPEC ACCEL v1.3.  
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