**Lenovo Global Technology**  
ThinkSystem SN550  
(2.60 GHz, Intel Xeon Gold 6240)

| SPECspeed2017_fp_base = | 132 |
| SPECspeed2017_fp_peak = | Not Run |

**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology

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**Hardware**

- **CPU Name:** Intel Xeon Gold 6240  
- **Max MHz.:** 3900  
- **Nominal:** 2600  
- **Enabled:** 36 cores, 2 chips, 2 threads/core  
- **Orderable:** 1.2 chips  
- **Cache L1:** 32 KB I + 32 KB D on chip per core  
- **L2:** 1 MB I+D on chip per core  
- **L3:** 24.75 MB I+D on chip per chip  
- **Other:** None  
- **Memory:** 768 GB (24 x 32 GB 2Rx4 PC4-2933Y-R)  
- **Storage:** 1 x 960 GB SATA SSD  
- **Other:** None

**Software**

- **OS:** Red Hat Enterprise Linux Server release 7.6 (Maipo)  
- **Compiler:** C/C++: Version 19.0.1.144 of Intel C/C++  
- **Fortran:** Version 19.0.1.144 of Intel Fortran  
- **Firmware:** Yes  
- **File System:** xfs  
- **System State:** Run level 3 (multi-user)  
- **Base Pointers:** 64-bit  
- **Peak Pointers:** Not Applicable  
- **Other:** None
Lenovo Global Technology
ThinkSystem SN550
(2.60 GHz, Intel Xeon Gold 6240)

CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

SPECspeed2017_fp_base = 132
SPECspeed2017_fp_peak = Not Run

Test Date: Apr-2019
Hardware Availability: Apr-2019
Software Availability: Nov-2018

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</table>

SPECspeed2017_fp_base = 132
SPECspeed2017_fp_peak = Not Run

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

General Notes

Environment variables set by runcpu before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/home/cpu2017-1.0.5-ic19.0u1/lib/intel64"
OMP_STACKSIZE = "192M"

Binaries compiled on a system with 1x Intel Core i9-7900X CPU + 32GB RAM
memory using Redhat Enterprise Linux 7.5
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
sync; echo 3>/proc/sys/vm/drop_caches

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2018-3640 (Spectre variant 3a) is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2018-3639 (Spectre variant 4) is mitigated in the system as tested and documented.
## Lenovo Global Technology

**ThinkSystem SN550**  
(2.60 GHz, Intel Xeon Gold 6240)

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</table>

**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology

### Platform Notes

- **BIOS configuration:**  
  Choose Operating Mode set to Custom Mode  
  Page Policy set to Adaptive  
  Trusted Execution Technology set to Enable

- **Sysinfo program** /home/cpu2017-1.0.5-ic19.0u1/bin/sysinfo  
  Rev: r5974 of 2018-05-19 9bcede8f2999c33d61f64985e45859ea9  
  running on localhost.localdomain Sat Apr 27 21:32:02 2019

- **SUT (System Under Test) info as seen by some common utilities.**  
  For more information on this section, see  
  https://www.spec.org/cpu2017/Docs/config.html#sysinfo

- **From /proc/cpuinfo**
  - model name: Intel(R) Xeon(R) Gold 6240 CPU @ 2.60GHz
  - cpu cores: 18
  - siblings: 36

- **From lscpu:**
  - Architecture: x86_64
  - CPU op-mode(s): 32-bit, 64-bit
  - Byte Order: Little Endian

(Continued on next page)
SPEC CPU2017 Floating Point Speed Result

Lenovo Global Technology
ThinkSystem SN550
(2.60 GHz, Intel Xeon Gold 6240)

SPECspeed2017_fp_base = 132
SPECspeed2017_fp_peak = Not Run

Platform Notes (Continued)

Flags:

Copyright 2017-2019 Standard Performance Evaluation Corporation
Lenovo Global Technology
ThinkSystem SN550
(2.60 GHz, Intel Xeon Gold 6240)

SPECspeed2017_fp_base = 132
SPECspeed2017_fp_peak = Not Run

CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Test Date: Apr-2019
Hardware Availability: Apr-2019
Software Availability: Nov-2018

Platform Notes (Continued)

system-release: Red Hat Enterprise Linux Server release 7.6 (Maipo)

uname -a:
    Linux localhost.localdomain 3.10.0-957.el7.x86_64 #1 SMP Thu Oct 4 20:48:51 UTC 2018
    x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:
CVE-2017-5754 (Meltdown): Not affected
CVE-2017-5753 (Spectre variant 1): Mitigation: Load fences, __user pointer sanitization
CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS

run-level 3 Apr 27 21:29

SPEC is set to: /home/cpu2017-1.0.5-ic19.0u1
    Filesystem  Type Size Used Avail Use% Mounted on
    /dev/sda2      xfs   839G   21G  819G   3% /home

Additional information from dmidecode follows. 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 -[IVE135M-2.10]- 01/16/2019
    Memory:
    24x Samsung M393A4K40CB2-CVF 32 GB 2 rank 2933

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
CC  619.lbm_s(base) 638.imagick_s(base) 644.nab_s(base)
==============================================================================
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
==============================================================================

==============================================================================
FC  607.cactuBSSN_s(base)
==============================================================================
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Lenovo Global Technology
ThinkSystem SN550 (2.60 GHz, Intel Xeon Gold 6240)

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### Compiler Version Notes (Continued)

```
Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.0.1.144 Build 20181018
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
```

```
Compiler Version Notes (Continued)
=603.bwaves_s(base) 649.fotonik3d_s(base) 654.roms_s(base)=
=621.wrf_s(base) 627.cam4_s(base) 628.pop2_s(base)=
```

```
C benchmarks:
icc -m64 -std=c11
```

```
Fortran benchmarks:
ifort -m64
```

```
Benchmarks using both Fortran and C:
ifort -m64 icc -m64 -std=c11
```

```
Benchmarks using Fortran, C, and C++:
icpc -m64 icc -m64 -std=c11 ifort -m64
```

### Base Portability Flags

```
603.bwaves_s: -DSPEC_LP64
```
## SPEC CPU2017 Floating Point Speed Result

**Lenovo Global Technology**  
ThinkSystem SN550  
(2.60 GHz, Intel Xeon Gold 6240)

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**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology

### Base Portability Flags (Continued)

- 607.cactuBSSN_s: -DSPEC_LP64  
- 619.lbm_s: -DSPEC_LP64  
- 621.wrf_s: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian  
- 627.cam4_s: -DSPEC_LP64 -DSPEC_CASE_FLAG  
- 628.pop2_s: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian -assume byterecl  
- 638.imagick_s: -DSPEC_LP64  
- 644.nab_s: -DSPEC_LP64  
- 649.fotonik3d_s: -DSPEC_LP64  
- 654.roms_s: -DSPEC_LP64

### Base Optimization Flags

**C benchmarks:**
- -xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch  
- -ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC_OPENMP

**Fortran benchmarks:**
- -DSPEC_OPENMP -xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch  
- -ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp  
- -nostandard-realloc-lhs

**Benchmarks using both Fortran and C:**
- -xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch  
- -ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC_OPENMP  
- -nostandard-realloc-lhs

**Benchmarks using Fortran, C, and C++:**
- -xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch  
- -ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC_OPENMP  
- -nostandard-realloc-lhs

The flags files that were used to format this result can be browsed at  

You can also download the XML flags sources by saving the following links:  
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For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

Tested with SPEC CPU2017 v1.0.5 on 2019-04-27 21:32:02-0400.