SPEC CPU®2017 Floating Point Rate Result

My Corporation

SPECrate®2017_fp_base = 5.42

SPECrate®2017_fp_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)
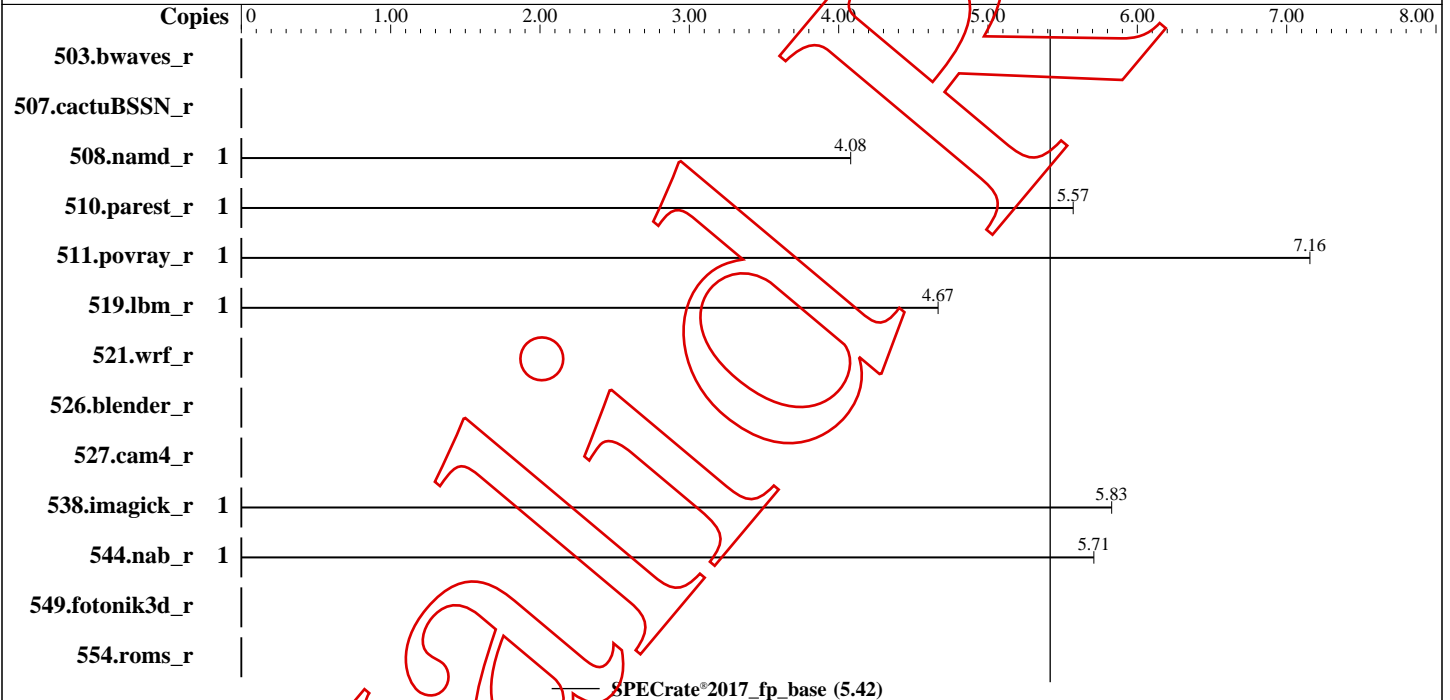**Test Sponsor:** My Corporation
Tested by: My Corporation

Test Date: Jun-2024
Hardware Availability:
Software Availability:

Copies	Result
503.bwaves_r	
507.cactuBSSN_r	
508.namd_r 1	4.08
510.parest_r 1	5.57
511.povray_r 1	7.16
519.lbm_r 1	4.67
521.wrf_r	
526.blender_r	
527.cam4_r	
538.imagick_r 1	5.83
544.nab_r 1	5.71
549.fotonik3d_r	
554.roms_r	

SPECrate®2017_fp_base (5.42)

Hardware

CPU Name: 13th Gen Intel Core i9-13900KS
Max MHz:
Nominal:
Enabled: cores, 1 chip, threads/core
Orderable:
Cache L1:
L2:
L3:
Other:
Memory: 125.561 GB fixme: If using DDR4, the format is: 'N GB (N x N GB nRxn PC4-nnnnX-X)'
Storage: 3.6 TB add more disk info here
Other:

Software

OS: Ubuntu 22.04.4 LTS 6.8.0-76060800daily20240311-generic
Compiler: C/C++/Fortran: Version 7.2.1 of GCC, the GNU Compiler Collection
Parallel: No
Firmware:
File System: ext4
System State: Run level 5 (add definition here)
Base Pointers: 64-bit
Peak Pointers: Not Applicable
Other:
Power Management: --

Errors

'reportable' flag not set during run

538.imagick_r (base) did not have enough runs!

554.roms_r (base) did not have enough runs!

519.lbm_r (base) did not have enough runs!

521.wrf_r (base) did not have enough runs!

527.cam4_r (base) did not have enough runs!

544.nab_r (base) did not have enough runs!

(Continued on next page)

SPEC CPU®2017 Floating Point Rate Result

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SPECrate®2017_fp_base =	5.42
SPECrate®2017_fp_peak =	Not Run

Errors (Continued)

508.namd_r (base) did not have enough runs!
526.blender_r (base) did not have enough runs!
549.fotonik3d_r (base) did not have enough runs!
510.parest_r (base) did not have enough runs!
511.povray_r (base) did not have enough runs!
507.cactuBSSN_r (base) did not have enough runs!
503.bwaves_r (base) did not have enough runs!
Unknown flags were used! See
    https://www.spec.org/cpu2017/Docs/runcpu.html#flagsurl
for information about how to get rid of this error.

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r														
507.cactuBSSN_r														
508.namd_r	1	**233**	**4.08**											
510.parest_r	1	**470**	**5.57**											
511.povray_r	1	**326**	**7.16**											
519.lbm_r	1	**226**	**4.67**											
521.wrf_r														
526.blender_r														
527.cam4_r														
538.imagick_r	1	**427**	**5.83**											
544.nab_r	1	**295**	**5.71**											
549.fotonik3d_r														
554.roms_r														
SPECrate®2017_fp_base =		5.42												
SPECrate®2017_fp_peak =		Not Run												

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

Environment Variables Notes

```
Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/usr/lib64/:/usr/lib/:/lib64"
```

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SPECrate®2017_fp_base =   5.42

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CPU2017 License: nnn (Your SPEC license number)		**Test Date:**	Jun-2024
Test Sponsor:	My Corporation	**Hardware Availability:**	
Tested by:	My Corporation	**Software Availability:**	

Platform Notes

```
Sysinfo program /mnt/seconddrive/Code/seguecg-root/segue-lfi/spec2017/bin/sysinfo
Rev: r6365 of 2019-08-21 295195f888a3d7edb1e6e46a485a0011
running on shr-work Wed Jun 12 00:36:24 2024

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 : 13th Gen Intel(R) Core(TM) i9-13900KS
      1  "physical id"s (chips)
      24 "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  : 24
      physical 0: cores 0 4 8 12 16 20 24 28 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46
      47

From lscpu:
      Architecture:           x86_64
      CPU op-mode(s):         32-bit, 64-bit
      Address sizes:          46 bits physical, 48 bits virtual
      Byte Order:             Little Endian
      CPU(s):                 32
      On-line CPU(s) list:    0,2,4,6,8,10,12,14,16-31
      Off-line CPU(s) list:   1,3,5,7,9,11,13,15
      Vendor ID:              GenuineIntel
      Model name:             13th Gen Intel(R) Core(TM) i9-13900KS
      CPU family:             6
      Model:                  183
      Thread(s) per core:     1
      Core(s) per socket:     24
      Socket(s):              1
      Stepping:               1
      CPU max MHz:            6000.0000
      CPU min MHz:            0.0000
      BogoMIPS:               6374.40
      Flags:                  fpu vme de pse tsc msr pae mce cx8 apic sep mtrr
   pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx
   pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology
   nonstop_tsc cpuid aperfmperf tsc_known_freq pni pclmulqdq dtes64 monitor ds_cpl vmx
   smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm sse4_1 sse4_2 x2apic movbe popcnt
   tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault
   ssbd ibrs ibpb stibp ibrs_enhanced tpr_shadow flexpriority ept vpid ept_ad fsgsbase
   tsc_adjust bmi1 avx2 smep bmi2 erms invpcid rdseed adx smap clflushopt clwb intel_pt
```

(Continued on next page)

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SPECrate®2017_fp_base =   5.42

SPECrate®2017_fp_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)		**Test Date:**	Jun-2024
Test Sponsor:	My Corporation	**Hardware Availability:**	
Tested by:	My Corporation	**Software Availability:**	

Platform Notes (Continued)

```
    sha_ni xsaveopt xsavec xgetbv1 xsaves split_lock_detect user_shstk avx_vnni dtherm
    ida arat pln pts hwp hwp_notify hwp_act_window hwp_epp hwp_pkg_req hfi vnmi umip pku
    ospke waitpkg gfni vaes vpclmulqdq tme rdpid movdiri movdir64b fsrm md_clear
    serialize pconfig arch_lbr ibt flush_l1d arch_capabilities
    Virtualization:                VT-x
    L1d cache:                     896 KiB (24 instances)
    L1i cache:                     1.3 MiB (24 instances)
    L2 cache:                      32 MiB (12 instances)
    L3 cache:                      36 MiB (1 instance)
    NUMA node(s):                  1
    NUMA node0 CPU(s):             0,2,4,6,8,10,12,14,16-31
    Vulnerability Gather data sampling: Not affected
    Vulnerability Itlb multihit:   Not affected
    Vulnerability L1tf:            Not affected
    Vulnerability Mds:             Not affected
    Vulnerability Meltdown:        Not affected
    Vulnerability Mmio stale data: Not affected
    Vulnerability Retbleed:        Not affected
    Vulnerability Spec rstack overflow: Not affected
    Vulnerability Spec store bypass:    Mitigation; Speculative Store Bypass disabled
    via prctl
    Vulnerability Spectre v1:          Mitigation; usercopy/swapgs barriers and __user
    pointer sanitization
    Vulnerability Spectre v2:          Mitigation; Enhanced / Automatic IBRS, IBPB
    conditional, RSB filling, PBRSB-eIBRS SW sequence
    Vulnerability Srbds:           Not affected
    Vulnerability Tsx async abort: Not affected

  /proc/cpuinfo cache data
     cache size : 36864 KB

  From numactl --hardware  WARNING: a numactl 'node' might or might not correspond to a
  physical chip.

  From /proc/meminfo
     MemTotal:       131660532 kB
     HugePages_Total:        0
     Hugepagesize:       2048 kB

  /usr/bin/lsb_release -d
     Ubuntu 22.04.4 LTS

  From /etc/*release* /etc/*version*
     debian_version: bookworm/sid
     os-release:
        PRETTY_NAME="Ubuntu 22.04.4 LTS"
        NAME="Ubuntu"
```

(Continued on next page)

My Corporation

SPECrate®2017_fp_base = 5.42

SPECrate®2017_fp_peak = Not Run

CPU2017 License: nnn (Your SPEC license number) **Test Date:** Jun-2024
Test Sponsor: My Corporation **Hardware Availability:**
Tested by: My Corporation **Software Availability:**

Platform Notes (Continued)

```
    VERSION_ID="22.04"
    VERSION="22.04.4 LTS (Jammy Jellyfish)"
    VERSION_CODENAME=jammy
    ID=ubuntu
    ID_LIKE=debian
    HOME_URL="https://www.ubuntu.com/"

uname -a:
    Linux shr-work 6.8.0-76060800daily20240311-generic
    #202403110203~1713206908~22.04~3a62479~dev-Ubuntu SMP PREEMPT_DY x86_64 x86_64 x86_64
    GNU/Linux

Kernel self-reported vulnerability status:

gather_data_sampling:                  Not affected
itlb_multihit:                         Not affected
CVE-2018-3620 (L1 Terminal Fault):     Not affected
Microarchitectural Data Sampling:      Not affected
CVE-2017-5754 (Meltdown):              Not affected
mmio_stale_data:                       Not affected
retbleed:                              Not affected
spec_rstack_overflow:                  Not affected
CVE-2018-3639 (Speculative Store Bypass): Mitigation: Speculative Store Bypass disabled
                                       via prctl
CVE-2017-5753 (Spectre variant 1):     Mitigation: usercopy/swapgs barriers and __user
                                       pointer sanitization
CVE-2017-5715 (Spectre variant 2):     Mitigation: Enhanced / Automatic IBRS, IBPB:
                                       conditional, RSB filling, PBRSB-eIBRS: SW
                                       sequence
srbds:                                 Not affected
tsx_async_abort:                       Not affected

run-level 5 May 12 16:41

SPEC is set to: /mnt/seconddrive/Code/seguecg-root/segue-lfi/spec2017
    Filesystem      Type  Size  Used Avail Use% Mounted on
    /dev/nvme0n1p1 ext4  3.6T  693G  2.8T  20% /mnt/seconddrive

From /sys/devices/virtual/dmi/id
    BIOS:    System76 FH Z5 01/25/2024
    Vendor:  System76
    Product: Thelio Mira
    Product Family: Z790 MB

Cannot run dmidecode; consider saying (as root)
    chmod +s /usr/sbin/dmidecode
```

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My Corporation

SPECrate®2017_fp_base =   5.42

SPECrate®2017_fp_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)		**Test Date:**	Jun-2024
Test Sponsor:	My Corporation	**Hardware Availability:**	
Tested by:	My Corporation	**Software Availability:**	

Platform Notes (Continued)

```
 (End of data from sysinfo program)
```

Compiler Version Notes

```
==============================================================================
C        | 519.lbm_r(base) 538.imagick_r(base) 544.nab_r(base)
------------------------------------------------------------------------------
Using built-in specs.
COLLECT_GCC=/opt/native-gcc/bin/internal-x86_64-linux-musl-gcc
COLLECT_LTO_WRAPPER=/opt/native-gcc/bin/../libexec/gcc/x86_64-linux-musl/13.2.0/lto-wrapper
Target: x86_64-linux-musl
Configured with: ../gcc/configure --target=x86_64-linux-musl --disable-docs
  --disable-bootstrap --disable-libssp --disable-multilib --disable-shared
  --enable-languages=c,c++ --enable-lto
  --prefix=/home/zyedidia/programming/lfi/toolchain/lfi-gcc/native-gcc
  --with-pkgversion=LFI
Thread model: posix
Supported LTO compression algorithms: zlib zstd
gcc version 13.2.0 (LFI)
------------------------------------------------------------------------------


==============================================================================
C++      | 508.namd_r(base) 510.parest_r(base)
------------------------------------------------------------------------------
Using built-in specs.
COLLECT_GCC=/opt/native-gcc/bin/internal-x86_64-linux-musl-g++
COLLECT_LTO_WRAPPER=/opt/native-gcc/bin/../libexec/gcc/x86_64-linux-musl/13.2.0/lto-wrapper
Target: x86_64-linux-musl
Configured with: ../gcc/configure --target=x86_64-linux-musl --disable-docs
  --disable-bootstrap --disable-libssp --disable-multilib --disable-shared
  --enable-languages=c,c++ --enable-lto
  --prefix=/home/zyedidia/programming/lfi/toolchain/lfi-gcc/native-gcc
  --with-pkgversion=LFI
Thread model: posix
Supported LTO compression algorithms: zlib zstd
gcc version 13.2.0 (LFI)
------------------------------------------------------------------------------


==============================================================================
C++, C | 511.povray_r(base)
------------------------------------------------------------------------------
Using built-in specs.
COLLECT_GCC=/opt/native-gcc/bin/internal-x86_64-linux-musl-g++
COLLECT_LTO_WRAPPER=/opt/native-gcc/bin/../libexec/gcc/x86_64-linux-musl/13.2.0/lto-wrapper
Target: x86_64-linux-musl
Configured with: ../gcc/configure --target=x86_64-linux-musl --disable-docs
```

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Test Sponsor: My Corporation   **Hardware Availability:**
Tested by: My Corporation   **Software Availability:**

Compiler Version Notes (Continued)

```
  --disable-bootstrap --disable-libssp --disable-multilib --disable-shared
  --enable-languages=c,c++ --enable-lto
  --prefix=/home/zyedidia/programming/lfi/toolchain/lfi-gcc/native-gcc
  --with-pkgversion=LFI
Thread model: posix
Supported LTO compression algorithms: zlib zstd
gcc version 13.2.0 (LFI)
Using built-in specs.
COLLECT_GCC=/opt/native-gcc/bin/internal-x86_64-linux-musl-gcc
COLLECT_LTO_WRAPPER=/opt/native-gcc/bin/../libexec/gcc/x86_64-linux-musl/13.2.0/lto-wrapper
Target: x86_64-linux-musl
Configured with: ../gcc/configure --target=x86_64-linux-musl --disable-docs
  --disable-bootstrap --disable-libssp --disable-multilib --disable-shared
  --enable-languages=c,c++ --enable-lto
  --prefix=/home/zyedidia/programming/lfi/toolchain/lfi-gcc/native-gcc
  --with-pkgversion=LFI
Thread model: posix
Supported LTO compression algorithms: zlib zstd
gcc version 13.2.0 (LFI)
------------------------------------------------------------------------
```

Base Unknown Flags

508.namd_r: "/opt/native-gcc/bin/x86_64-linux-musl-" (in CXX)
"/opt/native-gcc/bin/x86_64-linux-musl-" (in LD)
"-fomit-frame-pointer" (in OPTIMIZE)

510.parest_r: "/opt/native-gcc/bin/x86_64-linux-musl-" (in CXX)
"/opt/native-gcc/bin/x86_64-linux-musl-" (in LD)
"-fomit-frame-pointer" (in OPTIMIZE)

511.povray_r: "/opt/native-gcc/bin/x86_64-linux-musl-" (in CXX)
"/opt/native-gcc/bin/x86_64-linux-musl-" (in CC)
"/opt/native-gcc/bin/x86_64-linux-musl-" (in LD)
"-fomit-frame-pointer" (in OPTIMIZE)

519.lbm_r: "/opt/native-gcc/bin/x86_64-linux-musl-" (in CC)
"/opt/native-gcc/bin/x86_64-linux-musl-" (in LD)
"-fomit-frame-pointer" (in OPTIMIZE)

538.imagick_r: "/opt/native-gcc/bin/x86_64-linux-musl-" (in CC)
"/opt/native-gcc/bin/x86_64-linux-musl-" (in LD)
"-fomit-frame-pointer" (in OPTIMIZE)

544.nab_r: "/opt/native-gcc/bin/x86_64-linux-musl-" (in CC)
"/opt/native-gcc/bin/x86_64-linux-musl-" (in LD)

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Base Unknown Flags (Continued)

544.nab_r (continued):
`"-fomit-frame-pointer"` (in `OPTIMIZE`)

Base Runtime Environment

Benchmarks using both C and C++:

511.povray_r: `No flags used`

Base Compiler Invocation

C benchmarks:
`gcc`

C++ benchmarks:
`g++`

Benchmarks using both C and C++:

511.povray_r: `g++ gcc`

Base Portability Flags

508.namd_r: `-DSPEC_LP64`
510.parest_r: `-DSPEC_LP64`
511.povray_r: `-DSPEC_LP64`
519.lbm_r: `-DSPEC_LP64`
538.imagick_r: `-DSPEC_LP64`
544.nab_r: `-DSPEC_LP64`

Base Optimization Flags

C benchmarks:
`-std=c99 -O3 -flto`

C++ benchmarks:
`-std=c++03 -O3 -flto`

(Continued on next page)

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Base Optimization Flags (Continued)

Benchmarks using both C and C++:

511.povray_r: `-std=c++03 -std=c99 -O3 -flto`

Base Other Flags

Benchmarks using both C and C++:

511.povray_r: `No flags used`

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

Tested with SPEC CPU®2017 v0.0.0 on 2024-06-12 00:36:23-0500.
Report generated on 2024-06-12 01:15:34 by CPU2017 PDF formatter v6255.