SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

Lenovo Global Technology

SPECrate®2017_fp_base =   169

ThinkEdge SE450
(2.20 GHz, Intel Xeon Gold 6330N)
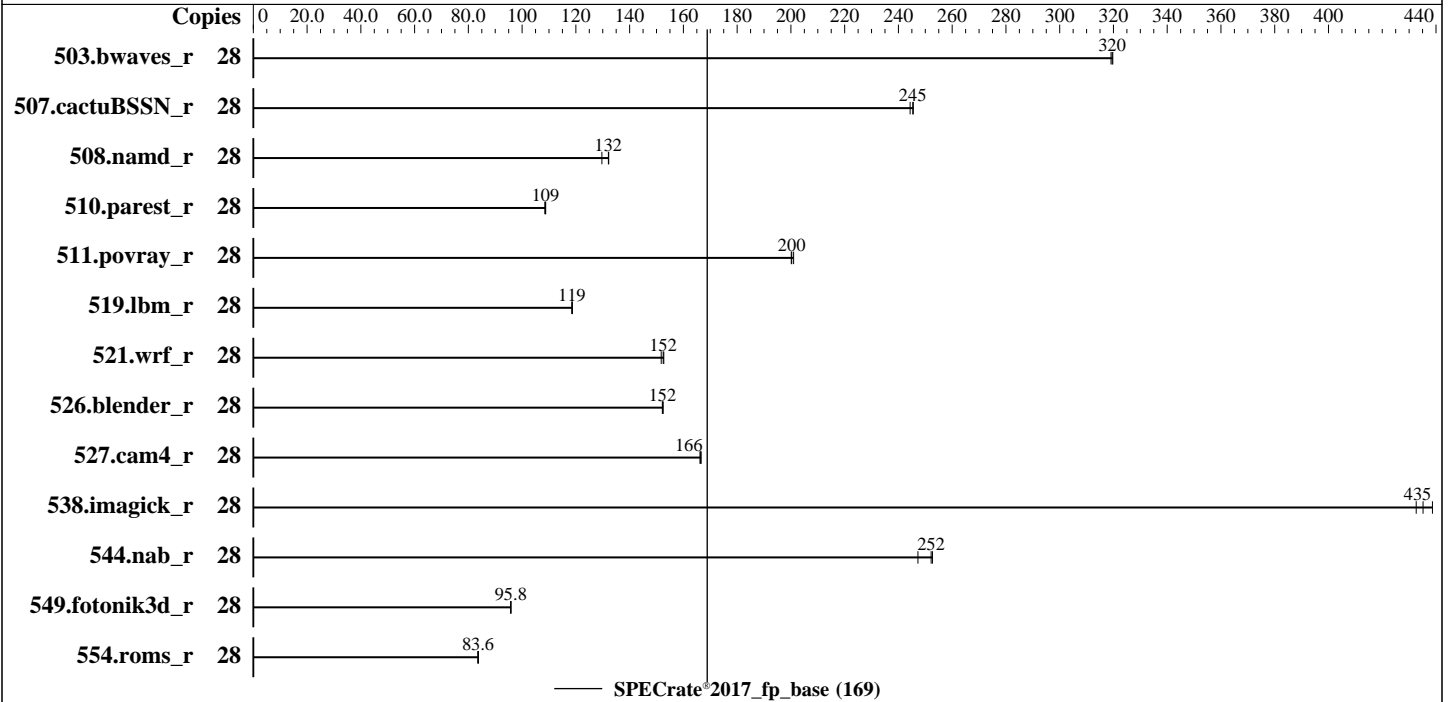
SPECrate®2017_fp_peak = Not Run

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

Test Date: May-2022
Hardware Availability: Apr-2022
Software Availability: Nov-2021

Benchmark	Copies	Result
503.bwaves_r	28	320
507.cactuBSSN_r	28	245
508.namd_r	28	132
510.parest_r	28	109
511.povray_r	28	200
519.lbm_r	28	119
521.wrf_r	28	152
526.blender_r	28	152
527.cam4_r	28	166
538.imagick_r	28	435
544.nab_r	28	252
549.fotonik3d_r	28	95.8
554.roms_r	28	83.6

SPECrate®2017_fp_base (169)

Hardware

CPU Name: Intel Xeon Gold 6330N
 Max MHz: 3400
 Nominal: 2200
Enabled: 28 cores, 1 chip
Orderable: 1 chip
Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 1.25 MB I+D on chip per core
 L3: 42 MB I+D on chip per chip
 Other: None
Memory: 256 GB (8 x 32 GB 2Rx4 PC4-3200AA-R, running at 2666)
Storage: 1 x 960 GB SATA SSD
Other: None

Software

OS: Red Hat Enterprise Linux 8.5 (Ootpa) Kernel 4.18.0-348.el8.x86_64
Compiler: C/C++: Version 2021.1 of Intel oneAPI DPC++/C++ Compiler Build 20201113 for Linux; Fortran: Version 2021.1 of Intel Fortran Compiler Classic Build 20201112 for Linux
Parallel: No
Firmware: Lenovo BIOS Version CME104I 1.01 released Mar-2022
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: Not Applicable
Other: jemalloc memory allocator V5.0.1
Power Management: BIOS and OS set to prefer performance at the cost of additional power usage

Standard Performance Evaluation Corporation (info@spec.org)   https://www.spec.org/

SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

Lenovo Global Technology

ThinkEdge SE450
(2.20 GHz, Intel Xeon Gold 6330N)

SPECrate®2017_fp_base = 169

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9017	**Test Date:** May-2022
Test Sponsor: Lenovo Global Technology	**Hardware Availability:** Apr-2022
Tested by: Lenovo Global Technology	**Software Availability:** Nov-2021

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	28	**879**	**320**	880	319	878	320							
507.cactuBSSN_r	28	145	244	**144**	**245**	144	246							
508.namd_r	28	205	130	201	132	**201**	**132**							
510.parest_r	28	675	108	673	109	**674**	**109**							
511.povray_r	28	327	200	**326**	**200**	325	201							
519.lbm_r	28	**249**	**119**	249	119	249	119							
521.wrf_r	28	413	152	411	153	**411**	**152**							
526.blender_r	28	280	152	280	152	**280**	**152**							
527.cam4_r	28	295	166	**294**	**166**	294	167							
538.imagick_r	28	**160**	**435**	161	433	159	439							
544.nab_r	28	**187**	**252**	187	253	191	247							
549.fotonik3d_r	28	**1139**	**95.8**	1139	95.8	1140	95.7							
554.roms_r	28	533	83.5	531	83.8	**532**	**83.6**							
SPECrate®2017_fp_base =		**169**												
SPECrate®2017_fp_peak =		Not Run												

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

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

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

Environment Variables Notes

```
Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH =
     "/home/cpu2017-1.1.8-ic2021.1-revB/lib/intel64:/home/cpu2017-1.1.8-ic202
     1.1-revB/je5.0.1-64"
MALLOC_CONF = "retain:true"
```

General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Red Hat Enterprise Linux 8.1
Transparent Huge Pages enabled by default

(Continued on next page)

SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

Lenovo Global Technology

ThinkEdge SE450
(2.20 GHz, Intel Xeon Gold 6330N)

SPECrate®2017_fp_base = 169

SPECrate®2017_fp_peak = Not Run

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

Test Date: May-2022
Hardware Availability: Apr-2022
Software Availability: Nov-2021

General Notes (Continued)

```
 Prior to runcpu invocation
 Filesystem page cache synced and cleared with:
 sync; echo 3>        /proc/sys/vm/drop_caches
 runcpu command invoked through numactl i.e.:
 numactl --interleave=all runcpu <etc>
NA: 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.
 jemalloc, a general purpose malloc implementation
 built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5
 sources available from jemalloc.net or https://github.com/jemalloc/jemalloc/releases
```

Platform Notes

```
BIOS configuration:
Choose Operating Mode set to Maximum Performance
Hyper-Threading set to Disabled
Adjacent Cache Prefetch set to Disabled

 Sysinfo program /home/cpu2017-1.1.8-ic2021.1-revB/bin/sysinfo
 Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d
 running on localhost.localdomain Fri May 20 01:48:21 2022

 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 6330N CPU @ 2.20GHz
       1  "physical id"s (chips)
       28 "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 : 28
       siblings  : 28
       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

 From lscpu from util-linux 2.32.1:
      Architecture:        x86_64
      CPU op-mode(s):      32-bit, 64-bit
      Byte Order:          Little Endian
      CPU(s):              28
```

Standard Performance Evaluation Corporation (info@spec.org)   https://www.spec.org/

Lenovo Global Technology

SPECrate®2017_fp_base =   169

ThinkEdge SE450
(2.20 GHz, Intel Xeon Gold 6330N)

SPECrate®2017_fp_peak = Not Run

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

Test Date: May-2022
Hardware Availability: Apr-2022
Software Availability: Nov-2021

Platform Notes (Continued)

```
        On-line CPU(s) list: 0-27
        Thread(s) per core:  1
        Core(s) per socket:  28
        Socket(s):           1
        NUMA node(s):        2
        Vendor ID:           GenuineIntel
        BIOS Vendor ID:      Intel(R) Corporation
        CPU family:          6
        Model:               106
        Model name:          Intel(R) Xeon(R) Gold 6330N CPU @ 2.20GHz
        BIOS Model name:     Intel(R) Xeon(R) Gold 6330N CPU @ 2.20GHz
        Stepping:            6
        CPU MHz:             2200.000
        BogoMIPS:            4400.00
        Virtualization:      VT-x
        L1d cache:           48K
        L1i cache:           32K
        L2 cache:            1280K
        L3 cache:            43008K
        NUMA node0 CPU(s):   0-13
        NUMA node1 CPU(s):   14-27
        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 pni pclmulqdq dtes64 ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm
    pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c
    rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 invpcid_single intel_ppin
    ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid ept_ad
    fsgsbase tsc_adjust sgx bmi1 hle avx2 smep bmi2 erms invpcid cqm rdt_a avx512f
    avx512dq rdseed adx smap avx512ifma clflushopt clwb intel_pt avx512cd sha_ni
    avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
    cqm_mbm_local split_lock_detect wbnoinvd dtherm ida arat pln pts avx512vbmi umip pku
    ospke avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnni avx512_bitalg tme
    avx512_vpopcntdq la57 rdpid sgx_lc fsrm md_clear pconfig flush_l1d arch_capabilities

 /proc/cpuinfo cache data
    cache size : 43008 KB

 From numactl --hardware
 WARNING: a numactl 'node' might or might not correspond to a physical chip.
   available: 2 nodes (0-1)
   node 0 cpus: 0 1 2 3 4 5 6 7 8 9 10 11 12 13
   node 0 size: 128611 MB
   node 0 free: 128063 MB
   node 1 cpus: 14 15 16 17 18 19 20 21 22 23 24 25 26 27
   node 1 size: 128981 MB
   node 1 free: 128635 MB
```

(Continued on next page)

Lenovo Global Technology

ThinkEdge SE450
(2.20 GHz, Intel Xeon Gold 6330N)

SPECrate®2017_fp_base =   169

SPECrate®2017_fp_peak = Not Run

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

Test Date: May-2022
Hardware Availability: Apr-2022
Software Availability: Nov-2021

Platform Notes (Continued)

```
  node distances:
  node   0   1
    0:  10  11
    1:  11  10

From /proc/meminfo
   MemTotal:       263774752 kB
   HugePages_Total:        0
   Hugepagesize:        2048 kB

/sbin/tuned-adm active
    Current active profile: throughput-performance

From /etc/*release* /etc/*version*
   os-release:
      NAME="Red Hat Enterprise Linux"
      VERSION="8.5 (Ootpa)"
      ID="rhel"
      ID_LIKE="fedora"
      VERSION_ID="8.5"
      PLATFORM_ID="platform:el8"
      PRETTY_NAME="Red Hat Enterprise Linux 8.5 (Ootpa)"
      ANSI_COLOR="0;31"
   redhat-release: Red Hat Enterprise Linux release 8.5 (Ootpa)
   system-release: Red Hat Enterprise Linux release 8.5 (Ootpa)
   system-release-cpe: cpe:/o:redhat:enterprise_linux:8::baseos

uname -a:
   Linux localhost.localdomain 4.18.0-348.el8.x86_64 #1 SMP Mon Oct 4 12:17:22 EDT 2021
   x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-12207 (iTLB Multihit):                Not affected
CVE-2018-3620 (L1 Terminal Fault):             Not affected
Microarchitectural Data Sampling:              Not affected
CVE-2017-5754 (Meltdown):                      Not affected
CVE-2018-3639 (Speculative Store Bypass):      Mitigation: Speculative Store
                                               Bypass disabled via prctl and
                                               seccomp
CVE-2017-5753 (Spectre variant 1):             Mitigation: usercopy/swapgs
                                               barriers and __user pointer
                                               sanitization
CVE-2017-5715 (Spectre variant 2):             Mitigation: Enhanced IBRS, IBPB:
                                               conditional, RSB filling
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort):       Not affected
```

(Continued on next page)

Lenovo Global Technology

ThinkEdge SE450
(2.20 GHz, Intel Xeon Gold 6330N)

SPECrate®2017_fp_base =   169

SPECrate®2017_fp_peak = Not Run

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

Test Date: May-2022
Hardware Availability: Apr-2022
Software Availability: Nov-2021

Platform Notes (Continued)

```
 run-level 3 May 20 01:47

 SPEC is set to: /home/cpu2017-1.1.8-ic2021.1-revB
    Filesystem      Type  Size  Used Avail Use% Mounted on
    /dev/sda4       xfs   819G   26G  793G   4% /home

 From /sys/devices/virtual/dmi/id
    Vendor:          Lenovo
    Product:         ThinkEdge SE450
    Product Family:  ThinkSystem
    Serial:          1234567890

 Additional information from dmidecode 3.2 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.
   Memory:
     8x Samsung M393A4K40DB3-CWE 32 GB 2 rank 3200, configured at 2666

 BIOS:
    BIOS Vendor:       Lenovo
    BIOS Version:      CME104I-1.01
    BIOS Date:         03/17/2022
    BIOS Revision:     1.1
    Firmware Revision: 1.10

 (End of data from sysinfo program)
```

Compiler Version Notes

```
==============================================================================
C                 | 519.lbm_r(base) 538.imagick_r(base) 544.nab_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------


==============================================================================
C++               | 508.namd_r(base) 510.parest_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
```

Lenovo Global Technology

ThinkEdge SE450
(2.20 GHz, Intel Xeon Gold 6330N)

SPECrate®2017_fp_base =   169

SPECrate®2017_fp_peak = Not Run

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

Test Date: May-2022
Hardware Availability: Apr-2022
Software Availability: Nov-2021

Compiler Version Notes (Continued)

```
==============================================================================
C++, C           | 511.povray_r(base) 526.blender_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------


==============================================================================
C++, C, Fortran | 507.cactuBSSN_r(base)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on
  Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
Fortran          | 503.bwaves_r(base) 549.fotonik3d_r(base) 554.roms_r(base)
------------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on
  Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation.  All rights reserved.
------------------------------------------------------------------------------


==============================================================================
Fortran, C       | 521.wrf_r(base) 527.cam4_r(base)
------------------------------------------------------------------------------
Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on
  Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation.  All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
```

SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

Lenovo Global Technology

ThinkEdge SE450
(2.20 GHz, Intel Xeon Gold 6330N)

SPECrate®2017_fp_base =   169

SPECrate®2017_fp_peak = Not Run

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

Test Date: May-2022
Hardware Availability: Apr-2022
Software Availability: Nov-2021

Base Compiler Invocation

C benchmarks:
`icx`

C++ benchmarks:
`icpx`

Fortran benchmarks:
`ifort`

Benchmarks using both Fortran and C:
`ifort icx`

Benchmarks using both C and C++:
`icpx icx`

Benchmarks using Fortran, C, and C++:
`icpx icx ifort`

Base Portability Flags

503.bwaves_r: `-DSPEC_LP64`
507.cactuBSSN_r: `-DSPEC_LP64`
508.namd_r: `-DSPEC_LP64`
510.parest_r: `-DSPEC_LP64`
511.povray_r: `-DSPEC_LP64`
519.lbm_r: `-DSPEC_LP64`
521.wrf_r: `-DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian`
526.blender_r: `-DSPEC_LP64 -DSPEC_LINUX -funsigned-char`
527.cam4_r: `-DSPEC_LP64 -DSPEC_CASE_FLAG`
538.imagick_r: `-DSPEC_LP64`
544.nab_r: `-DSPEC_LP64`
549.fotonik3d_r: `-DSPEC_LP64`
554.roms_r: `-DSPEC_LP64`

Base Optimization Flags

C benchmarks:
`-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math`
`-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4`
`-mbranches-within-32B-boundaries -ljemalloc`
`-L/usr/local/jemalloc64-5.0.1/lib`

(Continued on next page)

Standard Performance Evaluation Corporation (info@spec.org)   https://www.spec.org/

Lenovo Global Technology

ThinkEdge SE450
(2.20 GHz, Intel Xeon Gold 6330N)

SPECrate®2017_fp_base =   169

SPECrate®2017_fp_peak = Not Run

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

Test Date: May-2022
Hardware Availability: Apr-2022
Software Availability: Nov-2021

Base Optimization Flags (Continued)

C++ benchmarks:
```
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Fortran benchmarks:
```
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ipo -no-prec-div
-qopt-prefetch -ffinite-math-only
-qopt-multiple-gather-scatter-by-shuffles -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-mbranches-within-32B-boundaries -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both Fortran and C:
```
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -O3 -ipo
-no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-multiple-gather-scatter-by-shuffles
-mbranches-within-32B-boundaries -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both C and C++:
```
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using Fortran, C, and C++:
```
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -O3
-no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-multiple-gather-scatter-by-shuffles
-mbranches-within-32B-boundaries -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-ICElake-J.html
http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-ICElake-J.xml
http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.xml

SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

Lenovo Global Technology

ThinkEdge SE450
(2.20 GHz, Intel Xeon Gold 6330N)

SPECrate®2017_fp_base =   169

SPECrate®2017_fp_peak = Not Run

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

Test Date: May-2022
Hardware Availability: Apr-2022
Software Availability: Nov-2021

SPEC CPU and SPECrate are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU®2017 v1.1.8 on 2022-05-19 13:48:21-0400.
Report generated on 2022-06-07 15:46:11 by CPU2017 PDF formatter v6442.
Originally published on 2022-06-07.