



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

## Lenovo Global Technology

SPECrate®2017\_fp\_base = 288

ThinkSystem ST650 V3  
(3.70 GHz, Intel Xeon Gold 6434)

SPECrate®2017\_fp\_peak = Not Run

CPU2017 License: 9017

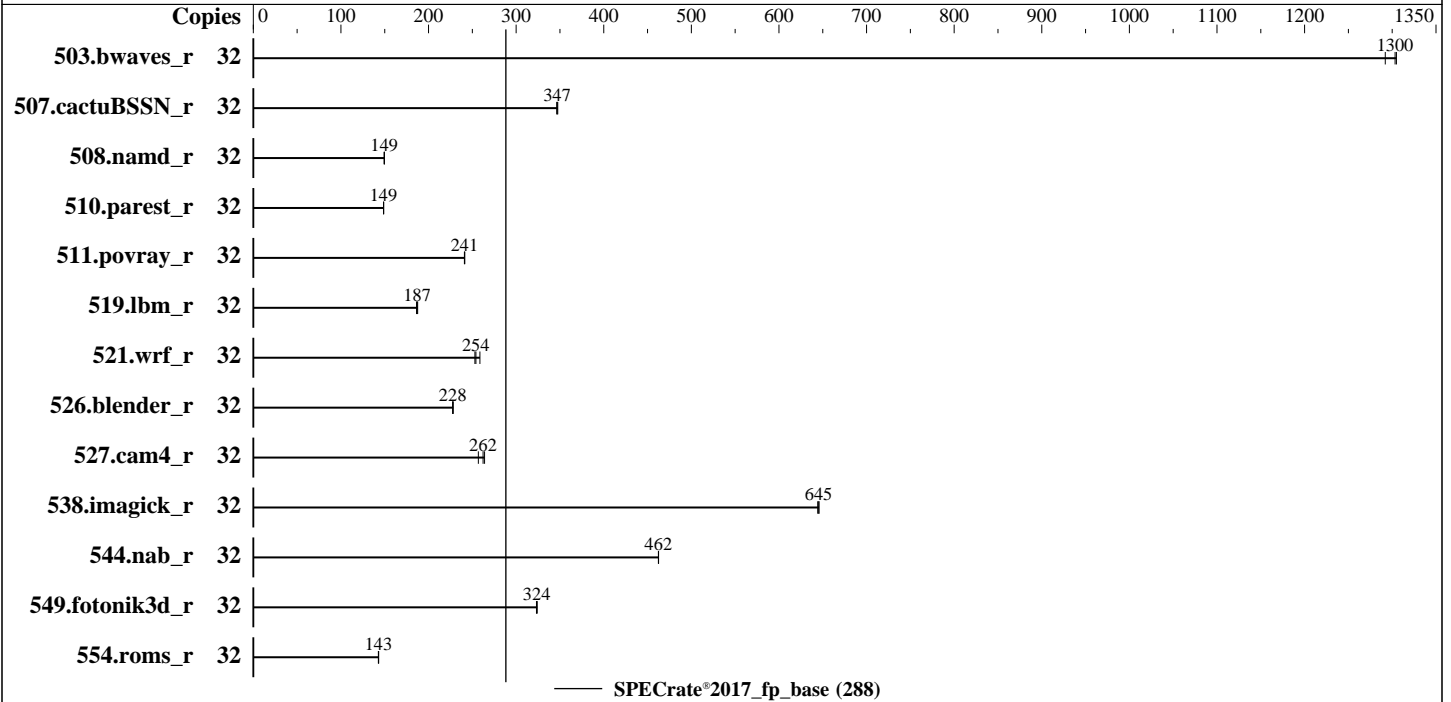
Test Date: Jun-2023

Test Sponsor: Lenovo Global Technology

Hardware Availability: May-2023

Tested by: Lenovo Global Technology

Software Availability: Dec-2022



### Hardware

CPU Name: Intel Xeon Gold 6434  
 Max MHz: 4100  
 Nominal: 3700  
 Enabled: 16 cores, 2 chips, 2 threads/core  
 Orderable: 1,2 chips  
 Cache L1: 32 KB I + 48 KB D on chip per core  
 L2: 2 MB I+D on chip per core  
 L3: 22.5 MB I+D on chip per chip  
 Other: None  
 Memory: 512 GB (16 x 32 GB 2Rx8 PC5-4800B-R)  
 Storage: 1 x 960 GB SATA SSD  
 Other: None

### Software

OS: SUSE Linux Enterprise Server 15 SP4 (x86\_64)  
 Kernel 5.14.21-150400.22-default  
 Compiler: C/C++: Version 2023.0 of Intel oneAPI DPC++/C++ Compiler for Linux;  
 Fortran: Version 2023.0 of Intel Fortran Compiler for Linux;  
 Parallel: No  
 Firmware: Lenovo BIOS Version USE113Y 2.10 released Mar-2023  
 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



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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	32	<b><u>246</u></b>	<b><u>1300</u></b>	246	1300	248	1290							
507.cactuBSSN_r	32	117	348	117	346	<b><u>117</u></b>	<b><u>347</u></b>							
508.namd_r	32	<b><u>203</u></b>	<b><u>149</u></b>	203	150	203	149							
510.parest_r	32	<b><u>563</u></b>	<b><u>149</u></b>	563	149	562	149							
511.povray_r	32	310	241	<b><u>310</u></b>	<b><u>241</u></b>	310	241							
519.lbm_r	32	<b><u>180</u></b>	<b><u>187</u></b>	181	186	180	188							
521.wrf_r	32	277	259	283	253	<b><u>282</u></b>	<b><u>254</u></b>							
526.blender_r	32	214	228	214	228	<b><u>214</u></b>	<b><u>228</u></b>							
527.cam4_r	32	<b><u>213</u></b>	<b><u>262</u></b>	218	257	212	264							
538.imagick_r	32	123	646	<b><u>123</u></b>	<b><u>645</u></b>	124	644							
544.nab_r	32	116	463	<b><u>116</u></b>	<b><u>462</u></b>	116	462							
549.fotonik3d_r	32	386	323	385	324	<b><u>385</u></b>	<b><u>324</u></b>							
554.roms_r	32	355	143	<b><u>356</u></b>	<b><u>143</u></b>	356	143							

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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/cpu2017-1.1.9-ic2023.0/lib/intel64:/home/cpu2017-1.1.9-ic2023.0/je5.0.1-64"  
MALLOC\_CONF = "retain:true"

## General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Red Hat Enterprise Linux 8.4  
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  
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.

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## General Notes (Continued)

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 and then set it to Custom Mode  
C-States set to Legacy  
SNC set to SNC2  
LLC Prefetch set to Disabled  
AMP Prefetch set to Enable

Sysinfo program /home/cpu2017-1.1.9-ic2023.0/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on localhost Mon Jun 12 14:25:33 2023

SUT (System Under Test) info as seen by some common utilities.

-----  
Table of contents  
-----

1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numactl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 249 (249.11+suse.124.g2bc0b2c447)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. sysctl
16. /sys/kernel/mm/transparent\_hugepage
17. /sys/kernel/mm/transparent\_hugepage/khugepaged
18. OS release
19. Disk information
20. /sys/devices/virtual/dmi/id
21. dmidecode
22. BIOS

-----  
1. uname -a  
Linux localhost 5.14.21-150400.22-default #1 SMP PREEMPT\_DYNAMIC Wed May 11 06:57:18 UTC 2022 (49db222)  
x86\_64 x86\_64 x86\_64 GNU/Linux  
-----

2. w  
14:25:33 up 11 min, 1 user, load average: 0.07, 0.02, 0.00  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT

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### Platform Notes (Continued)

```
root      tty1      -                14:21    7.00s  0.77s  0.01s -bash
```

-----  
3. Username

From environment variable \$USER: root

-----  
4. ulimit -a

```
core file size          (blocks, -c) unlimited
data seg size           (kbytes, -d) unlimited
scheduling priority     (-e) 0
file size                (blocks, -f) unlimited
pending signals         (-i) 2062701
max locked memory       (kbytes, -l) 64
max memory size         (kbytes, -m) unlimited
open files              (-n) 1024
pipe size               (512 bytes, -p) 8
POSIX message queues    (bytes, -q) 819200
real-time priority      (-r) 0
stack size              (kbytes, -s) unlimited
cpu time                (seconds, -t) unlimited
max user processes      (-u) 2062701
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited
```

-----  
5. sysinfo process ancestry

```
/usr/lib/systemd/systemd --switched-root --system --deserialize 30
login -- root
-bash
-bash
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=32 -c
ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define smt-on --define cores=16 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base -o all fprate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=32 --configfile
ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define smt-on --define cores=16 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base --output_format all --nopower --runmode
rate --tune base --size refrate fprate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.046/temlogs/preenv.fprate.046.0.log --lognum 046.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017-1.1.9-ic2023.0
```

-----  
6. /proc/cpuinfo

```
model name      : Intel(R) Xeon(R) Gold 6434
vendor_id      : GenuineIntel
cpu family     : 6
model          : 143
stepping       : 8
microcode      : 0x2b000190
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs
cpu cores      : 8
siblings       : 16
2 physical ids (chips)
32 processors (hardware threads)
physical id 0: core ids 0-7
physical id 1: core ids 0-7
physical id 0: apicids 0-15
physical id 1: apicids 128-143
```

Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for

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### Platform Notes (Continued)

virtualized systems. Use the above data carefully.

#### 7. lscpu

From lscpu from util-linux 2.37.2:

```

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:         46 bits physical, 57 bits virtual
Byte Order:            Little Endian
CPU(s):                32
On-line CPU(s) list:   0-31
Vendor ID:             GenuineIntel
Model name:            Intel(R) Xeon(R) Gold 6434
CPU family:            6
Model:                 143
Thread(s) per core:    2
Core(s) per socket:    8
Socket(s):             2
Stepping:              8
BogoMIPS:              7400.00
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 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 cat_l2 cdp_l3
                        invpcid_single intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced
                        tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 hle
                        avx2 smep bmi2 erms invpcid rtm 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 avx_vnni avx512_bf16 wbnoinvd dtherm ida
                        arat pln pts avx512vbmi umip pku ospke waitpkg avx512_vbmi2 gfni vaes
                        vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid
                        bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm md_clear serialize
                        tsxldtrk pconfig arch_lbr avx512_fp16 amx_tile flush_l1d arch_capabilities
Virtualization:        VT-x
L1d cache:             768 KiB (16 instances)
L1i cache:             512 KiB (16 instances)
L2 cache:              32 MiB (16 instances)
L3 cache:              45 MiB (2 instances)
NUMA node(s):          2
NUMA node0 CPU(s):    0-7,16-23
NUMA node1 CPU(s):    8-15,24-31
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf:    Not affected
Vulnerability Mds:     Not affected
Vulnerability Meltdown: Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced IBRS, IBPB conditional, RSB filling
Vulnerability Srbds:   Not affected
Vulnerability Tsx async abort: Not affected

```

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	768K	12	Data	1	64	1	64
L1i	32K	512K	8	Instruction	1	64	1	64

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### Platform Notes (Continued)

L2	2M	32M	16 Unified	2	2048	1	64
L3	22.5M	45M	15 Unified	3	24576	1	64

#### 8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.

```
available: 2 nodes (0-1)
node 0 cpus: 0-7,16-23
node 0 size: 257675 MB
node 0 free: 256916 MB
node 1 cpus: 8-15,24-31
node 1 size: 258023 MB
node 1 free: 257434 MB
node distances:
node  0  1
  0:  10  21
  1:  21  10
```

#### 9. /proc/meminfo

MemTotal: 528075996 kB

#### 10. who -r

run-level 3 Jun 12 14:14

#### 11. Systemd service manager version: systemd 249 (249.11+suse.124.g2bc0b2c447)

```
Default Target Status
multi-user      running
```

#### 12. Services, from systemctl list-unit-files

```
STATE UNIT FILES
enabled YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron getty@ haveged irqbalance
issue-generator kbdsettings klog lvm2-monitor nscd postfix purge-kernels rollback rsyslog
smartd sshd wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime systemd-remount-fs
disabled autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait
chronyd console-getty cups cups-browsed debug-shell ebttables exchange-bmc-os-info
firewalld gpm grub2-once haveged-switch-root ipmi ipmievdev issue-add-ssh-keys kexec-load
lunmask man-db-create multipathd nfs nfs-blkmap rdisc rpcbind rpmconfigcheck rsyncd
serial-getty@ smartd_generate_opts snmpd snmptrapd systemd-boot-check-no-failures
systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd
indirect wickedd
```

#### 13. Linux kernel boot-time arguments, from /proc/cmdline

```
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150400.22-default
root=UUID=17904382-c2c1-4de4-88b3-dda5a45ba9e5
splash=silent
mitigations=auto
quiet
security=apparmor
```

#### 14. cpupower frequency-info

```
analyzing CPU 0:
Unable to determine current policy
boost state support:
```

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### Platform Notes (Continued)

Supported: yes  
Active: yes

```

-----
15. sysctl
kernel.numa_balancing          1
kernel.randomize_va_space     2
vm.compaction_proactiveness    20
vm.dirty_background_bytes      0
vm.dirty_background_ratio      10
vm.dirty_bytes                 0
vm.dirty_expire_centisecs      3000
vm.dirty_ratio                 20
vm.dirty_writeback_centisecs   500
vm.dirtytime_expire_seconds    43200
vm.extfrag_threshold           500
vm.min_unmapped_ratio          1
vm.nr_hugepages                0
vm.nr_hugepages_mempolicy      0
vm.nr_overcommit_hugepages     0
vm.swappiness                   60
vm.watermark_boost_factor      15000
vm.watermark_scale_factor      10
vm.zone_reclaim_mode           0

```

```

-----
16. /sys/kernel/mm/transparent_hugepage
defrag          always defer defer+madvice [madvice] never
enabled         [always] madvice never
hpage_pmd_size 2097152
shmem_enabled   always within_size advise [never] deny force

```

```

-----
17. /sys/kernel/mm/transparent_hugepage/khugepaged
alloc_sleep_millisecs  60000
defrag                 1
max_ptes_none          511
max_ptes_shared        256
max_ptes_swap          64
pages_to_scan          4096
scan_sleep_millisecs   10000

```

```

-----
18. OS release
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP4

```

```

-----
19. Disk information
SPEC is set to: /home/cpu2017-1.1.9-ic2023.0
Filesystem  Type  Size  Used Avail Use% Mounted on
/dev/sda2   xfs   894G  82G  813G  10% /

```

```

-----
20. /sys/devices/virtual/dmi/id
Vendor:      Lenovo
Product:     ThinkSystem ST650 V3 MAIN BOARD
Product Family: ThinkSystem
Serial:      MDSN00110D

```

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### Platform Notes (Continued)

#### 21. dmidecode

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:

14x Samsung M321R4GA3BB0-CQKEG 32 GB 2 rank 4800  
2x Samsung M321R4GA3BB0-CQKVG 32 GB 2 rank 4800

#### 22. BIOS

(This section combines info from /sys/devices and dmidecode.)

BIOS Vendor: Lenovo  
BIOS Version: USE113Y-2.10  
BIOS Date: 03/26/2023  
BIOS Revision: 2.10  
Firmware Revision: 2.10

### 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 2023.0.0 Build 20221201  
Copyright (C) 1985-2022 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 2023.0.0 Build 20221201  
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

=====  
C++, C | 511.povray\_r(base) 526.blender\_r(base)  
=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201  
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201  
Copyright (C) 1985-2022 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 2023.0.0 Build 20221201  
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201  
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201  
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

=====  
Fortran | 503.bwaves\_r(base) 549.fotonik3d\_r(base) 554.roms\_r(base)  
=====

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## Compiler Version Notes (Continued)

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201  
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

-----  
Fortran, C | 521.wrf\_r(base) 527.cam4\_r(base)  
-----

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201  
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201  
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.  
-----

## Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using both C and C++:

icpx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## 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

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

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**Lenovo Global Technology**

SPECrate®2017\_fp\_base = 288

ThinkSystem ST650 V3  
(3.70 GHz, Intel Xeon Gold 6434)

SPECrate®2017\_fp\_peak = Not Run

**CPU2017 License:** 9017

**Test Date:** Jun-2023

**Test Sponsor:** Lenovo Global Technology

**Hardware Availability:** May-2023

**Tested by:** Lenovo Global Technology

**Software Availability:** Dec-2022

## Base Portability Flags (Continued)

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 -xsapphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

### C++ benchmarks:

```
-w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

### Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

### Benchmarks using both Fortran and C:

```
-w -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -mprefer-vector-width=512 -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

### Benchmarks using both C and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512
-ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

### Benchmarks using Fortran, C, and C++:

```
-w -m64 -std=c++14 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```



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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-Eaglestream-T.html>

<http://www.spec.org/cpu2017/flags/Intel-ic2023-official-linux64.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-Eaglestream-T.xml>

<http://www.spec.org/cpu2017/flags/Intel-ic2023-official-linux64.xml>

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