



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

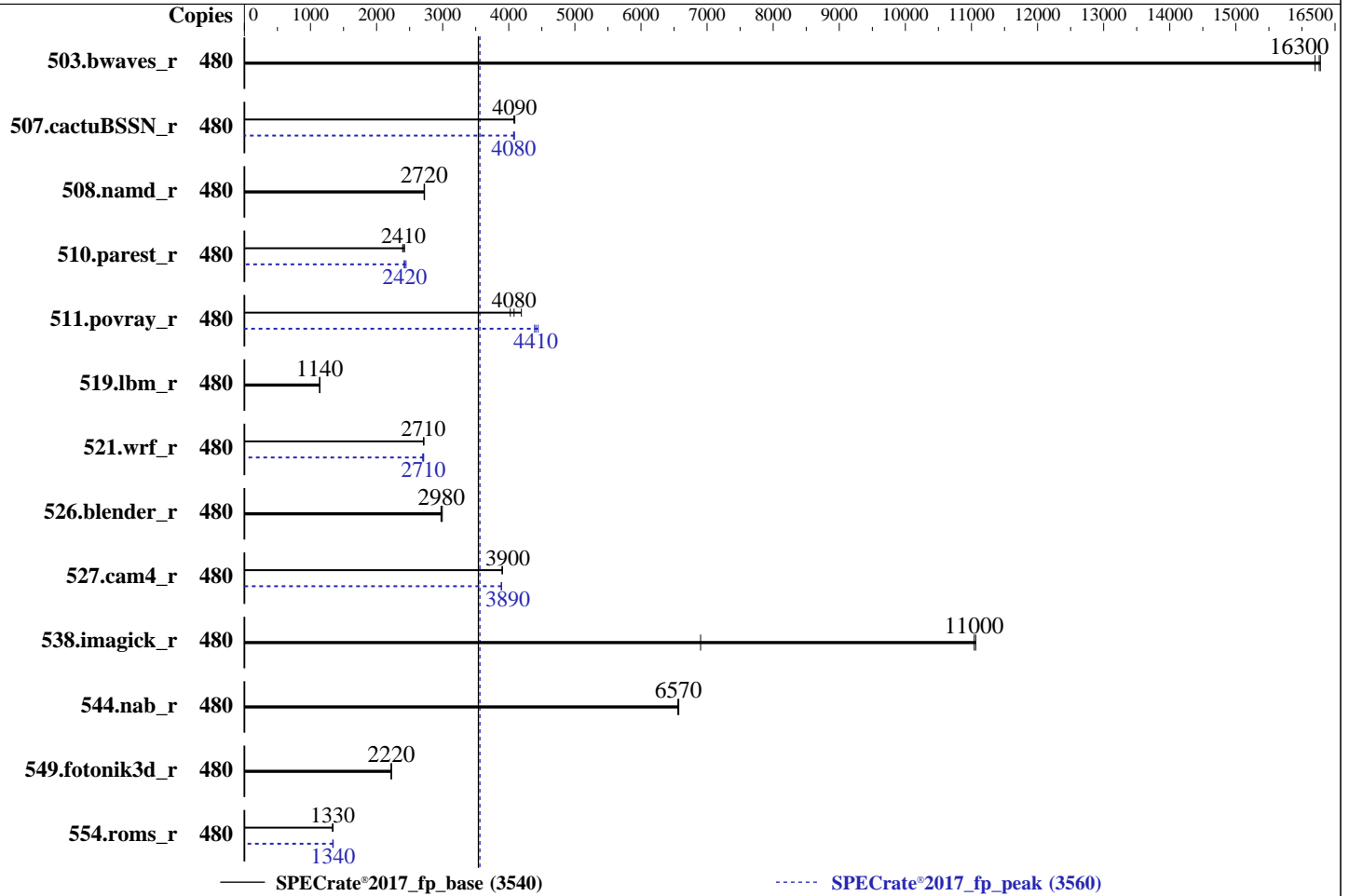
SuperServer SYS-681E-TR
(X13OEI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022



Hardware

CPU Name: Intel Xeon Platinum 8490H
Max MHz: 3500
Nominal: 1900
Enabled: 480 cores, 8 chips
Orderable: 1,2,4,8 chips
Cache L1: 32 KB I + 48 KB D on chip per core
L2: 2 MB I+D on chip per core
L3: 112.5 MB I+D on chip per chip
Other: None
Memory: 4 TB
(64 x 64 GB 2Rx4 PC5-4800B-R)
Storage: 1 x 800 GB NVMe SSD
Other: None

Software

OS: SUSE Linux Enterprise Server 15 SP4
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: Version 1.0a released May-2023 tested as Mar-2023
File System: ext4
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other: jemalloc memory allocator V5.0.1
Power Management: BIOS and OS set to prefer performance at the cost
of additional power usage.



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X130EI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Results Table

Benchmark	Base						Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	480	297	16200	296	16300	<u>296</u>	<u>16300</u>	480	297	16200	296	16300	<u>296</u>	<u>16300</u>
507.cactuBSSN_r	480	<u>149</u>	<u>4090</u>	149	4080	149	4090	480	149	4070	149	4090	<u>149</u>	<u>4080</u>
508.namd_r	480	167	2730	<u>168</u>	<u>2720</u>	168	2720	480	167	2730	<u>168</u>	<u>2720</u>	168	2720
510.parest_r	480	<u>522</u>	<u>2410</u>	518	2420	524	2390	480	513	2450	<u>518</u>	<u>2420</u>	520	2420
511.povray_r	480	267	4190	279	4020	<u>275</u>	<u>4080</u>	480	252	4440	255	4390	<u>254</u>	<u>4410</u>
519.lbm_r	480	444	1140	444	1140	<u>444</u>	<u>1140</u>	480	444	1140	444	1140	<u>444</u>	<u>1140</u>
521.wrf_r	480	<u>397</u>	<u>2710</u>	397	2710	396	2720	480	399	2700	397	2710	<u>397</u>	<u>2710</u>
526.blender_r	480	244	2990	<u>245</u>	<u>2980</u>	246	2970	480	244	2990	<u>245</u>	<u>2980</u>	246	2970
527.cam4_r	480	215	3900	215	3900	<u>215</u>	<u>3900</u>	480	216	3890	<u>216</u>	<u>3890</u>	216	3890
538.imagick_r	480	108	11100	173	6900	<u>108</u>	<u>11000</u>	480	108	11100	173	6900	<u>108</u>	<u>11000</u>
544.nab_r	480	<u>123</u>	<u>6570</u>	123	6570	123	6560	480	<u>123</u>	<u>6570</u>	123	6570	123	6560
549.fotonik3d_r	480	842	2220	841	2220	<u>842</u>	<u>2220</u>	480	842	2220	841	2220	<u>842</u>	<u>2220</u>
554.roms_r	480	569	1340	<u>572</u>	<u>1330</u>	572	1330	480	<u>569</u>	<u>1340</u>	567	1340	570	1340

SPECrate®2017_fp_base = **3540**

SPECrate®2017_fp_peak = **3560**

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 =
"/root/cpu2017-1.1.9/lib/intel64:/root/cpu2017-1.1.9/je5.0.1-64"
MALLOCONF = "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:

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X130EI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

General Notes (Continued)

```
sync; echo 3> /proc/sys/vm/drop_caches
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
```

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-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) 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 Settings:

Power Technology = Custom
Power Performance Tuning = BIOS Controls EPB
ENERGY_PERF_BIAS_CFG mode = Max Performance
SNC = Enable SNC4 (4-Clusters)
KTI Prefetch = Enable
LLC Dead Line Alloc = Disable
DCU Streamer Prefetcher = Disable
Hyper-Threading [ALL] = Disable

Sysinfo program /root/cpu2017-1.1.9/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost Tue Mar 21 19:25:20 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

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X130EI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Platform Notes (Continued)

- 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
19:25:20 up 13 min, 1 user, load average: 0.56, 1.72, 2.82
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
root      tty1     -             19:13    16.00s 1.56s  0.06s  -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) 16512517
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) 16512517
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited
```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X130EI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Platform Notes (Continued)

```

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=480 -c
ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define cores=480 --define physicalfirst --define
invoke_with_interleave --define drop_caches --tune base,peak -o all fprate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=480 --configfile
ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define cores=480 --define physicalfirst --define
invoke_with_interleave --define drop_caches --tune base,peak --output_format all --nopower --runmode rate
--tune base:peak --size refrate fprate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.003/templogs/preenv.fprate.003.0.log --lognum 003.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /root/cpu2017-1.1.9

```

```

-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) Platinum 8490H
vendor_id      : GenuineIntel
cpu family     : 6
model          : 143
stepping       : 6
microcode      : 0x2b0001b0
bugs           : spectre_v1 spectre_v2 spec_store_bypass swappg
cpu cores      : 60
siblings       : 60
8 physical ids (chips)
480 processors (hardware threads)
physical id 0: core ids 0-59
physical id 1: core ids 0-59
physical id 2: core ids 0-59
physical id 3: core ids 0-59
physical id 4: core ids 0-59
physical id 5: core ids 0-59
physical id 6: core ids 0-59
physical id 7: core ids 0-59
physical id 0: apicids
0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72
, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118
physical id 1: apicids
128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 1
80, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 23
2, 234, 236, 238, 240, 242, 244, 246
physical id 2: apicids
256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 3
08, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 36

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X13OEI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Platform Notes (Continued)

0,362,364,366,368,370,372,374

physical id 3: apicids

384,386,388,390,392,394,396,398,400,402,404,406,408,410,412,414,416,418,420,422,424,426,428,430,432,434,436,438,440,442,444,446,448,450,452,454,456,458,460,462,464,466,468,470,472,474,476,478,480,482,484,486,488,490,492,494,496,498,500,502

physical id 4: apicids

512,514,516,518,520,522,524,526,528,530,532,534,536,538,540,542,544,546,548,550,552,554,556,558,560,562,564,566,568,570,572,574,576,578,580,582,584,586,588,590,592,594,596,598,600,602,604,606,608,610,612,614,616,618,620,622,624,626,628,630

physical id 5: apicids

640,642,644,646,648,650,652,654,656,658,660,662,664,666,668,670,672,674,676,678,680,682,684,686,688,690,692,694,696,698,700,702,704,706,708,710,712,714,716,718,720,722,724,726,728,730,732,734,736,738,740,742,744,746,748,750,752,754,756,758

physical id 6: apicids

768,770,772,774,776,778,780,782,784,786,788,790,792,794,796,798,800,802,804,806,808,810,812,814,816,818,820,822,824,826,828,830,832,834,836,838,840,842,844,846,848,850,852,854,856,858,860,862,864,866,868,870,872,874,876,878,880,882,884,886

physical id 7: apicids

896,898,900,902,904,906,908,910,912,914,916,918,920,922,924,926,928,930,932,934,936,938,940,942,944,946,948,950,952,954,956,958,960,962,964,966,968,970,972,974,976,978,980,982,984,986,988,990,992,994,996,998,1000,1002,1004,1006,1008,1010,1012,1014

Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for 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:          52 bits physical, 57 bits virtual
Byte Order:             Little Endian
CPU(s):                 480
On-line CPU(s) list:   0-479
Vendor ID:              GenuineIntel
Model name:             Intel(R) Xeon(R) Platinum 8490H
CPU family:             6
Model:                  143
Thread(s) per core:    1
Core(s) per socket:    60
Socket(s):              8
Stepping:               6
Frequency boost:        enabled
CPU max MHz:            1901.0000
CPU min MHz:           800.0000
BogoMIPS:               3800.00
Flags:                   fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36
```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X13OEI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Platform Notes (Continued)

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 cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow
vmx 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_lld arch_capabilities

Virtualization: VT-x
L1d cache: 22.5 MiB (480 instances)
L1i cache: 15 MiB (480 instances)
L2 cache: 960 MiB (480 instances)
L3 cache: 900 MiB (8 instances)
NUMA node(s): 32
NUMA node0 CPU(s): 0-14
NUMA node1 CPU(s): 15-29
NUMA node2 CPU(s): 30-44
NUMA node3 CPU(s): 45-59
NUMA node4 CPU(s): 60-74
NUMA node5 CPU(s): 75-89
NUMA node6 CPU(s): 90-104
NUMA node7 CPU(s): 105-119
NUMA node8 CPU(s): 120-134
NUMA node9 CPU(s): 135-149
NUMA node10 CPU(s): 150-164
NUMA node11 CPU(s): 165-179
NUMA node12 CPU(s): 180-194
NUMA node13 CPU(s): 195-209
NUMA node14 CPU(s): 210-224
NUMA node15 CPU(s): 225-239
NUMA node16 CPU(s): 240-254
NUMA node17 CPU(s): 255-269
NUMA node18 CPU(s): 270-284
NUMA node19 CPU(s): 285-299
NUMA node20 CPU(s): 300-314
NUMA node21 CPU(s): 315-329
NUMA node22 CPU(s): 330-344
NUMA node23 CPU(s): 345-359
NUMA node24 CPU(s): 360-374

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X130EI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Platform Notes (Continued)

```

NUMA node25 CPU(s):          375-389
NUMA node26 CPU(s):          390-404
NUMA node27 CPU(s):          405-419
NUMA node28 CPU(s):          420-434
NUMA node29 CPU(s):          435-449
NUMA node30 CPU(s):          450-464
NUMA node31 CPU(s):          465-479
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	22.5M	12	Data	1	64	1	64
L1i	32K	15M	8	Instruction	1	64	1	64
L2	2M	960M	16	Unified	2	2048	1	64
L3	112.5M	900M	15	Unified	3	122880	1	64

8. numactl --hardware

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

```

available: 32 nodes (0-31)
node 0 cpus: 0-14
node 0 size: 128648 MB
node 0 free: 127457 MB
node 1 cpus: 15-29
node 1 size: 129020 MB
node 1 free: 128604 MB
node 2 cpus: 30-44
node 2 size: 129020 MB
node 2 free: 128720 MB
node 3 cpus: 45-59
node 3 size: 129020 MB
node 3 free: 128689 MB
node 4 cpus: 60-74
node 4 size: 129020 MB
node 4 free: 128861 MB
node 5 cpus: 75-89
node 5 size: 129020 MB
node 5 free: 128882 MB
node 6 cpus: 90-104

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X13OEI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Platform Notes (Continued)

```

node 6 size: 129020 MB
node 6 free: 128863 MB
node 7 cpus: 105-119
node 7 size: 129020 MB
node 7 free: 128874 MB
node 8 cpus: 120-134
node 8 size: 129020 MB
node 8 free: 128538 MB
node 9 cpus: 135-149
node 9 size: 129020 MB
node 9 free: 128226 MB
node 10 cpus: 150-164
node 10 size: 129020 MB
node 10 free: 128499 MB
node 11 cpus: 165-179
node 11 size: 129020 MB
node 11 free: 128595 MB
node 12 cpus: 180-194
node 12 size: 129020 MB
node 12 free: 128655 MB
node 13 cpus: 195-209
node 13 size: 129020 MB
node 13 free: 128692 MB
node 14 cpus: 210-224
node 14 size: 129020 MB
node 14 free: 128642 MB
node 15 cpus: 225-239
node 15 size: 129020 MB
node 15 free: 128722 MB
node 16 cpus: 240-254
node 16 size: 129020 MB
node 16 free: 128708 MB
node 17 cpus: 255-269
node 17 size: 129020 MB
node 17 free: 128725 MB
node 18 cpus: 270-284
node 18 size: 129020 MB
node 18 free: 128746 MB
node 19 cpus: 285-299
node 19 size: 129020 MB
node 19 free: 128730 MB
node 20 cpus: 300-314
node 20 size: 128985 MB
node 20 free: 128829 MB
node 21 cpus: 315-329
node 21 size: 129020 MB
node 21 free: 128874 MB

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X130EI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Platform Notes (Continued)

```

node 22 cpus: 330-344
node 22 size: 129020 MB
node 22 free: 128896 MB
node 23 cpus: 345-359
node 23 size: 129020 MB
node 23 free: 128899 MB
node 24 cpus: 360-374
node 24 size: 129020 MB
node 24 free: 128897 MB
node 25 cpus: 375-389
node 25 size: 129020 MB
node 25 free: 128896 MB
node 26 cpus: 390-404
node 26 size: 129020 MB
node 26 free: 128901 MB
node 27 cpus: 405-419
node 27 size: 129020 MB
node 27 free: 128900 MB
node 28 cpus: 420-434
node 28 size: 129020 MB
node 28 free: 128729 MB
node 29 cpus: 435-449
node 29 size: 129020 MB
node 29 free: 128740 MB
node 30 cpus: 450-464
node 30 size: 129020 MB
node 30 free: 128740 MB
node 31 cpus: 465-479
node 31 size: 128937 MB
node 31 free: 128638 MB
node distances:
node 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
0: 10 12 12 12 21 21 21 21 21 21 21 21 31 31 31 31 31 31 31 21 21 21 21 21
  21 21 21 31 31 31 31
1: 12 10 12 12 21 21 21 21 21 21 21 21 31 31 31 31 31 31 31 21 21 21 21 21
  21 21 21 31 31 31 31
2: 12 12 10 12 21 21 21 21 21 21 21 21 31 31 31 31 31 31 31 21 21 21 21 21
  21 21 21 31 31 31 31
3: 12 12 12 10 21 21 21 21 21 21 21 21 31 31 31 31 31 31 31 21 21 21 21 21
  21 21 21 31 31 31 31
4: 21 21 21 21 10 12 12 12 31 31 31 31 21 21 21 21 21 21 21 21 21 31 31 31 31
  31 31 31 21 21 21 21
5: 21 21 21 21 21 12 10 12 12 31 31 31 31 21 21 21 21 21 21 21 21 31 31 31 31
  31 31 31 21 21 21 21
6: 21 21 21 21 21 12 12 10 12 31 31 31 31 21 21 21 21 21 21 21 21 31 31 31 31
  31 31 31 21 21 21 21

```

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X130EI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Platform Notes (Continued)

7:	21	21	21	21	12	12	12	10	31	31	31	31	21	21	21	21	21	21	31	31	31	31	31		
	31	31	31	21	21	21	21																		
8:	21	21	21	21	31	31	31	31	10	12	12	12	21	21	21	21	21	21	21	31	31	31	31	31	
	31	31	31	21	21	21	21																		
9:	21	21	21	21	31	31	31	31	12	10	12	12	21	21	21	21	21	21	21	31	31	31	31	31	
	31	31	31	21	21	21	21																		
10:	21	21	21	21	31	31	31	31	12	12	10	12	21	21	21	21	21	21	21	31	31	31	31	31	
	31	31	31	21	21	21	21																		
11:	21	21	21	21	31	31	31	31	12	12	12	10	21	21	21	21	21	21	21	31	31	31	31	31	
	31	31	31	21	21	21	21																		
12:	31	31	31	31	21	21	21	21	21	21	21	10	12	12	12	31	31	31	31	21	21	21	21	21	
	21	21	21	31	31	31	31																		
13:	31	31	31	31	21	21	21	21	21	21	21	12	10	12	12	31	31	31	31	21	21	21	21	21	
	21	21	21	31	31	31	31																		
14:	31	31	31	31	21	21	21	21	21	21	21	12	12	10	12	31	31	31	31	21	21	21	21	21	
	21	21	21	31	31	31	31																		
15:	31	31	31	31	21	21	21	21	21	21	21	12	12	12	10	31	31	31	31	21	21	21	21	21	
	21	21	21	31	31	31	31																		
16:	31	31	31	31	21	21	21	21	21	21	21	31	31	31	31	10	12	12	12	21	21	21	21	21	
	21	21	21	31	31	31	31																		
17:	31	31	31	31	21	21	21	21	21	21	21	31	31	31	31	12	10	12	12	21	21	21	21	21	
	21	21	21	31	31	31	31																		
18:	31	31	31	31	21	21	21	21	21	21	21	31	31	31	31	12	12	10	12	21	21	21	21	21	
	21	21	21	31	31	31	31																		
19:	31	31	31	31	21	21	21	21	21	21	21	31	31	31	31	12	12	12	10	21	21	21	21	21	
	21	21	21	31	31	31	31																		
20:	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21	21	21	10	12	12	12	31	
	31	31	31	21	21	21	21																		
21:	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21	21	21	21	12	10	12	12	31
	31	31	31	21	21	21	21																		
22:	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21	21	21	21	12	12	10	12	31
	31	31	31	21	21	21	21																		
23:	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21	21	21	21	12	12	12	10	31
	31	31	31	21	21	21	21																		
24:	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21	21	21	31	31	31	31	10	
	12	12	12	21	21	21	21																		
25:	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21	21	21	31	31	31	31	12	
	10	12	12	21	21	21	21																		
26:	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21	21	21	31	31	31	31	12	
	12	10	12	21	21	21	21																		
27:	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21	21	21	31	31	31	31	12	
	12	12	10	21	21	21	21																		
28:	31	31	31	31	21	21	21	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21	
	21	21	21	10	12	12	12																		
29:	31	31	31	31	21	21	21	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21	
	21	21	21	12	10	12	12																		
30:	31	31	31	31	21	21	21	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21	

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X13OEI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Platform Notes (Continued)

```
21 21 21 12 12 10 12
31: 31 31 31 31 31 21 21 21 21 21 21 21 31 31 31 31 31 31 31 21 21 21 21 21
21 21 21 12 12 12 10
```

9. /proc/meminfo
MemTotal: 4227228692 kB

10. who -r
run-level 3 Mar 21 19:13

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 bluetooth cron display-manager getty@ haveged irqbalance iscsi issue-generator kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections postfix purge-kernels rollback rsyslog smartd sshd wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
enabled-runtime	systemd-fsck-root systemd-remount-fs
disabled	accounts-daemon appstream-sync-cache autofs autoyast-initscripts blk-availability bluetooth-mesh 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 ipmievd iscsi-init iscsid iscsiuiio issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap nmb nvme-autoconnect ostree-remount rdisc rpcbind rpmconfigcheck rsyncd rtkit-daemon serial-getty@ smartd_generate_opts smb snmpd snmptrapd speech-dispatcherd svnservice systemd-boot-check-no-failures systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd udisks2 upower
indirect	wickedd

13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150400.22-default
root=UUID=45b5dbe6-1d05-41ac-80df-f59bb33eace7
splash=silent
mitigations=auto
quiet
security=

14. cpupower frequency-info

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X13OEI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Platform Notes (Continued)

analyzing CPU 0:

current policy: frequency should be within 800 MHz and 1.90 GHz.
The governor "ondemand" may decide which speed to use within this range.

boost state support:

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+madvise	[madvise]	never
enabled	[always]	madvise	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

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X13OEI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Platform Notes (Continued)

18. OS release

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

19. Disk information

SPEC is set to: /root/cpu2017-1.1.9
Filesystem Type Size Used Avail Use% Mounted on
/dev/nvme1nlp2 ext4 732G 472G 224G 68% /

20. /sys/devices/virtual/dmi/id

Vendor: Supermicro
Product: Super Server
Product Family: Family

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:
64x Micron Technology MTC40F2046S1RC48BA1 64 GB 2 rank 4800

22. BIOS

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

BIOS Vendor: American Megatrends International, LLC.
BIOS Version: 1.0a
BIOS Date: 03/16/2023
BIOS Revision: 5.29

Compiler Version Notes

C | 519.lbm_r(base, peak) 538.imagick_r(base, peak)
544.nab_r(base, peak)

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.

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X13OEI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Compiler Version Notes (Continued)

=====
C++ | 508.namd_r(base, peak) 510.parest_r(base, peak)

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, peak) 526.blender_r(base, peak)

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, peak)

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, peak) 549.fotonik3d_r(base, peak)
554.roms_r(base, peak)

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, peak) 527.cam4_r(base, peak)

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version
2023.0.0 Build 20221201

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X13OEI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Compiler Version Notes (Continued)

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
544.nab_r: -DSPEC_LP64
549.fotonik3d_r: -DSPEC_LP64
554.roms_r: -DSPEC_LP64



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X13OEI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

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
```

Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X13OEI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Peak Compiler Invocation (Continued)

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

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

519.lbm_r: basepeak = yes

538.imagick_r: basepeak = yes

544.nab_r: basepeak = yes

C++ benchmarks:

508.namd_r: basepeak = yes

510.parest_r: -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:

503.bwaves_r: basepeak = yes

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X13OEI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Mar-2023
Hardware Availability: May-2023
Software Availability: Dec-2022

Peak Optimization Flags (Continued)

549.fotonik3d_r: basepeak = yes

```
554.roms_r: -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++:

```
511.povray_r: -w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast -xCORE-AVX512 -ffast-math -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
```

526.blender_r: basepeak = yes

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
```

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

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

<http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-SPR-revC.html>

You can also download the XML flags sources by saving the following links:

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

<http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-SPR-revC.xml>



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Supermicro

SuperServer SYS-681E-TR
(X13OEI, Intel Xeon Platinum 8490H)

SPECrate®2017_fp_base = 3540

SPECrate®2017_fp_peak = 3560

CPU2017 License: 001176

Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Mar-2023

Hardware Availability: May-2023

Software Availability: Dec-2022

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 v1.1.9 on 2023-03-21 22:25:19-0400.

Report generated on 2023-04-12 12:43:33 by CPU2017 PDF formatter v6442.

Originally published on 2023-04-11.