



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

**Fsas Technologies Inc.**

(Test Sponsor: Fujitsu)

**SPECrate®2017\_fp\_base = 2360**

**PRIMERGY RX4770 M8, Intel Xeon 6748P, 2.50GHz**

**SPECrate®2017\_fp\_peak = Not Run**

**CPU2017 License:** 19

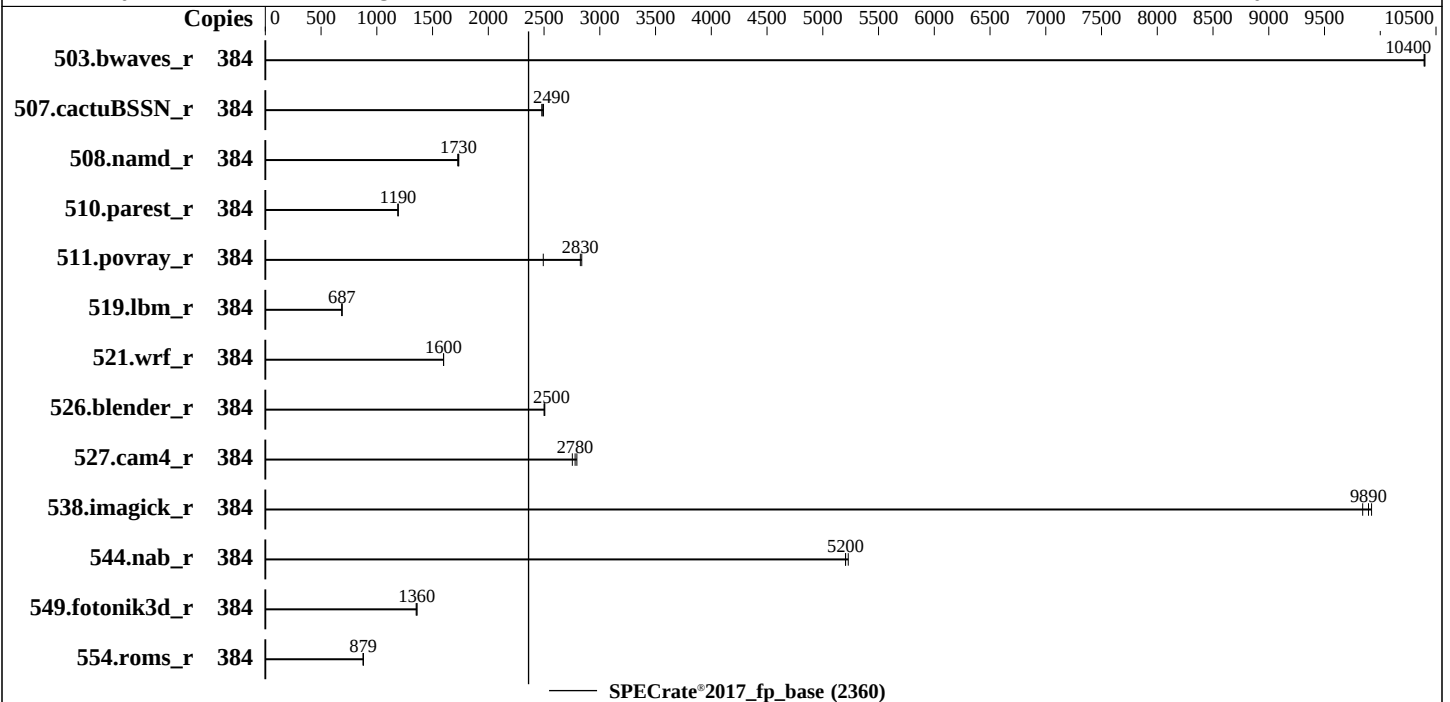
**Test Sponsor:** Fujitsu

**Tested by:** Fsas Technologies Inc.

**Test Date:** Dec-2025

**Hardware Availability:** Dec-2025

**Software Availability:** Jun-2025



## Hardware

CPU Name: Intel Xeon 6748P  
Max MHz: 4100  
Nominal: 2500  
Enabled: 192 cores, 4 chips, 2 threads/core  
Orderable: 2,4 chips  
Cache L1: 64 KB I + 48 KB D on chip per core  
L2: 2 MB I+D on chip per core  
L3: 192 MB I+D on chip per chip  
Other: None  
Memory: 2 TB (32 x 64 GB 2Rx4 PC5-6400B-R)  
Storage: 380 GB on tmpfs  
Other: CPU Cooling: Air

## Software

OS: SUSE Linux Enterprise Server 15 SP7  
6.4.0-150700.51-default  
Compiler: C/C++: Version 2024.1 of Intel oneAPI DPC++/C++  
Compiler for Linux;  
Fortran: Version 2024.1 of Intel Fortran  
Compiler for Linux;  
Parallel: No  
Firmware: Fsas Technologies Inc. BIOS Version V1.0.0.0  
R1.1.0 for D4136-A1x. Released Dec-2025  
tested as V1.0.0.0 R1.0.0 for D4136-A1x. Oct-2025  
File System: tmpfs  
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 set to prefer performance at the cost  
of additional power usage



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

**Fsas Technologies Inc.**

(Test Sponsor: Fujitsu)

SPECrate®2017\_fp\_base = 2360

SPECrate®2017\_fp\_peak = Not Run

PRIMERGY RX4770 M8, Intel Xeon 6748P, 2.50GHz

CPU2017 License: 19

Test Sponsor: Fujitsu

Tested by: Fsas Technologies Inc.

Test Date: Dec-2025

Hardware Availability: Dec-2025

Software Availability: Jun-2025

## Results Table

| Benchmark       | Base   |             |             |             |             |            |              | Peak   |         |       |         |       |         |       |
|-----------------|--------|-------------|-------------|-------------|-------------|------------|--------------|--------|---------|-------|---------|-------|---------|-------|
|                 | Copies | Seconds     | Ratio       | Seconds     | Ratio       | Seconds    | Ratio        | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 503.bwaves_r    | 384    | 371         | 10400       | 370         | 10400       | <b>370</b> | <b>10400</b> |        |         |       |         |       |         |       |
| 507.cactuBSSN_r | 384    | 196         | 2480        | 195         | 2500        | <b>195</b> | <b>2490</b>  |        |         |       |         |       |         |       |
| 508.namd_r      | 384    | 210         | 1730        | 211         | 1730        | <b>210</b> | <b>1730</b>  |        |         |       |         |       |         |       |
| 510.parest_r    | 384    | 843         | 1190        | 844         | 1190        | <b>844</b> | <b>1190</b>  |        |         |       |         |       |         |       |
| 511.povray_r    | 384    | <b>317</b>  | <b>2830</b> | 360         | 2490        | 316        | 2840         |        |         |       |         |       |         |       |
| 519.lbm_r       | 384    | 589         | 687         | <b>589</b>  | <b>687</b>  | 589        | 687          |        |         |       |         |       |         |       |
| 521.wrf_r       | 384    | 538         | 1600        | 538         | 1600        | <b>538</b> | <b>1600</b>  |        |         |       |         |       |         |       |
| 526.blender_r   | 384    | 233         | 2510        | 234         | 2500        | <b>234</b> | <b>2500</b>  |        |         |       |         |       |         |       |
| 527.cam4_r      | 384    | 240         | 2790        | <b>242</b>  | <b>2780</b> | 244        | 2750         |        |         |       |         |       |         |       |
| 538.imagick_r   | 384    | <b>96.5</b> | <b>9890</b> | 97.0        | 9840        | 96.3       | 9920         |        |         |       |         |       |         |       |
| 544.nab_r       | 384    | 124         | 5200        | <b>124</b>  | <b>5200</b> | 124        | 5230         |        |         |       |         |       |         |       |
| 549.fotonik3d_r | 384    | 1101        | 1360        | <b>1101</b> | <b>1360</b> | 1106       | 1350         |        |         |       |         |       |         |       |
| 554.roms_r      | 384    | 694         | 879         | <b>694</b>  | <b>879</b>  | 695        | 878          |        |         |       |         |       |         |       |

SPECrate®2017\_fp\_base = 2360

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 = "/mnt/ramdisk/speccpu-24.1/lib/intel64:/mnt/ramdisk/speccpu-24.1/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:  
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.

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

**Fsas Technologies Inc.**

(Test Sponsor: Fujitsu)

**SPECrate®2017\_fp\_base = 2360**

**PRIMERGY RX4770 M8, Intel Xeon 6748P, 2.50GHz**

**SPECrate®2017\_fp\_peak = Not Run**

**CPU2017 License:** 19

**Test Sponsor:** Fujitsu

**Tested by:** Fsas Technologies Inc.

**Test Date:** Dec-2025

**Hardware Availability:** Dec-2025

**Software Availability:** Jun-2025

## 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.

Benchmark run from a 380 GB ramdisk created with the command of "mount -t tmpfs -o size=380G tmpfs /mnt/ramdisk" 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:

Fan Control = Full

SNC (Sub NUMA) = Enabled

CPU Performance Boost = Aggressive

DCU Streamer Prefetcher = Disabled

Homeless Prefetch = Enabled

XPT Prefetch = Disabled

Loctorem Thresholds Normal = Low

Loctorem Thresholds Empty = Low

LLC Dead Line Alloc = Disabled

APS rocketing = Enabled

ASPM Support = Auto

Sysinfo program /mnt/ramdisk/speccpu-24.1/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on localhost Fri Dec 5 11:47:50 2025

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 254 (254.24+suse.148.g83b9060b6e)
  12. Failed units, from systemctl list-units --state=failed
  13. Services, from systemctl list-unit-files
  14. Linux kernel boot-time arguments, from /proc/cmdline
  15. cpupower frequency-info
  16. sysctl
  17. /sys/kernel/mm/transparent\_hugepage
  18. /sys/kernel/mm/transparent\_hugepage/khugepaged
  19. OS release
  20. Disk information
  21. /sys/devices/virtual/dmi/id
  22. dmidecode
  23. BIOS
- 

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

**Fsas Technologies Inc.**

(Test Sponsor: Fujitsu)

**SPECrate®2017\_fp\_base = 2360**

**SPECrate®2017\_fp\_peak = Not Run**

**PRIMERGY RX4770 M8, Intel Xeon 6748P, 2.50GHz**

**CPU2017 License:** 19

**Test Sponsor:** Fujitsu

**Tested by:** Fsas Technologies Inc.

**Test Date:** Dec-2025

**Hardware Availability:** Dec-2025

**Software Availability:** Jun-2025

## Platform Notes (Continued)

1. uname -a

```
Linux localhost 6.4.0-150700.51-default #1 SMP PREEMPT_DYNAMIC Wed Apr 30 21:35:43 UTC 2025 (6930611)
x86_64 x86_64 x86_64 GNU/Linux
```

2. w

```
11:47:50 up 9:41, 1 user, load average: 26.85, 223.24, 318.27
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU   WHAT
root      tty1      -               02:08    9:38m  3.41s  2.03s  -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) 8254718
max locked memory       (kbytes, -l) 8192
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) 8254718
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited
```

5. sysinfo process ancestry

```
/usr/lib/systemd/systemd --switched-root --system --deserialize=42
login -- root
-bash
-bash
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=384 -c
ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=192 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base -o all fprate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=384 --configfile
ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=192 --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/CPU2017.001/temlogs/preenv.fprate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/speccpu-24.1
```

6. /proc/cpuinfo

```
model name      : Intel(R) Xeon(R) 6748P
vendor_id       : GenuineIntel
cpu family      : 6
model           : 173
stepping        : 1
microcode       : 0x10003f3
bugs            : spectre_v1 spectre_v2 spec_store_bypass swaps bhi
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

**Fsas Technologies Inc.**

(Test Sponsor: Fujitsu)

**SPECrate®2017\_fp\_base = 2360**

**PRIMERGY RX4770 M8, Intel Xeon 6748P, 2.50GHz**

**SPECrate®2017\_fp\_peak = Not Run**

**CPU2017 License:** 19

**Test Sponsor:** Fujitsu

**Tested by:** Fsas Technologies Inc.

**Test Date:** Dec-2025

**Hardware Availability:** Dec-2025

**Software Availability:** Jun-2025

## Platform Notes (Continued)

```
cpu cores      : 48
siblings       : 96
4 physical ids (chips)
384 processors (hardware threads)
physical id 0: core ids 0-47
physical id 1: core ids 0-47
physical id 2: core ids 0-47
physical id 3: core ids 0-47
physical id 0: apicids 0-95
physical id 1: apicids 128-223
physical id 2: apicids 256-351
physical id 3: apicids 384-479
```

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 2.40.4:

```
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):                 384
On-line CPU(s) list:    0-383
Vendor ID:              GenuineIntel
Model name:             Intel(R) Xeon(R) 6748P
CPU family:             6
Model:                  173
Thread(s) per core:     2
Core(s) per socket:     48
Socket(s):              4
Stepping:               1
CPU(s) scaling MHz:     20%
CPU max MHz:            4100.0000
CPU min MHz:            800.0000
BogoMIPS:               5000.00
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 aperfperf 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 intel_ppin cdp_l2
                        ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow flexpriority ept
                        vpid ept_ad fsgsbase tsc_adjust bmi1 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 user_shstk avx_vnni avx512_bf16 wbnoinvd dtherm ida
                        arat pln pts hwp hwp_act_window hwp_epp hwp_pkg_req vnmi 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 ibt amx_bf16 avx512_fp16 amx_tile amx_int8 flush_l1d
                        arch_capabilities
Virtualization:         VT-x
L1d cache:              9 MiB (192 instances)
L1i cache:              12 MiB (192 instances)
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

**Fsas Technologies Inc.**

(Test Sponsor: Fujitsu)

**SPECrate®2017\_fp\_base = 2360**

**PRIMERGY RX4770 M8, Intel Xeon 6748P, 2.50GHz**

**SPECrate®2017\_fp\_peak = Not Run**

**CPU2017 License:** 19

**Test Sponsor:** Fujitsu

**Tested by:** Fsas Technologies Inc.

**Test Date:** Dec-2025

**Hardware Availability:** Dec-2025

**Software Availability:** Jun-2025

## Platform Notes (Continued)

L2 cache: 384 MiB (192 instances)  
L3 cache: 768 MiB (4 instances)  
NUMA node(s): 4  
NUMA node0 CPU(s): 0-47,192-239  
NUMA node1 CPU(s): 48-95,240-287  
NUMA node2 CPU(s): 96-143,288-335  
NUMA node3 CPU(s): 144-191,336-383  
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 Reg file data sampling: 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; PBRSE-eIBRS Not affected; BHI BHI\_DIS\_S  
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      | 9M       | 12   | Data        | 1     | 64     | 1        | 64             |
| L1i  | 64K      | 12M      | 16   | Instruction | 1     | 64     | 1        | 64             |
| L2   | 2M       | 384M     | 16   | Unified     | 2     | 2048   | 1        | 64             |
| L3   | 192M     | 768M     | 16   | Unified     | 3     | 196608 | 1        | 64             |

8. numactl --hardware

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

available: 4 nodes (0-3)  
node 0 cpus: 0-47,192-239  
node 0 size: 515612 MB  
node 0 free: 513095 MB  
node 1 cpus: 48-95,240-287  
node 1 size: 516070 MB  
node 1 free: 514052 MB  
node 2 cpus: 96-143,288-335  
node 2 size: 516031 MB  
node 2 free: 514051 MB  
node 3 cpus: 144-191,336-383  
node 3 size: 515992 MB  
node 3 free: 505883 MB  
node distances:  
node 0 1 2 3  
0: 10 21 21 21  
1: 21 10 21 21  
2: 21 21 10 21  
3: 21 21 21 10

9. /proc/meminfo

MemTotal: 2113235604 kB

10. who -r

run-level 3 Dec 5 02:07

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

**Fsas Technologies Inc.**

(Test Sponsor: Fujitsu)

**SPECrate®2017\_fp\_base = 2360**

**SPECrate®2017\_fp\_peak = Not Run**

**PRIMERGY RX4770 M8, Intel Xeon 6748P, 2.50GHz**

**CPU2017 License:** 19

**Test Sponsor:** Fujitsu

**Tested by:** Fsas Technologies Inc.

**Test Date:** Dec-2025

**Hardware Availability:** Dec-2025

**Software Availability:** Jun-2025

## Platform Notes (Continued)

11. Systemd service manager version: systemd 254 (254.24+suse.148.g83b9060b6e)

| Default Target | Status   |
|----------------|----------|
| multi-user     | degraded |

12. Failed units, from systemctl list-units --state=failed

| UNIT           | LOAD   | ACTIVE | SUB    | DESCRIPTION                                     |
|----------------|--------|--------|--------|-------------------------------------------------|
| * sep5.service | loaded | failed | failed | systemd script to load sep5 driver at boot time |

13. Services, from systemctl list-unit-files

| STATE           | UNIT FILES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| enabled         | YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron display-manager getty@ irqbalance issue-generator kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections nvmmf-autoconnect postfix purge-kernels rollback rsyslog sep5 smartd sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny                                                                                                                                                                                                            |
| enabled-runtime | systemd-remount-fs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| disabled        | autofs autostart-initscripts blk-availability boot-sysctl ca-certificates chrony-wait chronyd console-getty cups cups-browsed debug-shell ebttables exchange-bmc-os-info firewallld fsidd gpm grub2-once haveged ipmi ipmiev issue-add-ssh-keys kexec-load lunmask man-db-create multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd serial-getty@ smartd_generate_opts snmpd snmptrapd systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-sysexit systemd-time-wait-sync systemd-timesyncd vncserver@ |
| indirect        | systemd-userdbd wickedd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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

BOOT\_IMAGE=/boot/vmlinuz-6.4.0-150700.51-default  
root=UUID=6490486a-f020-45c4-b83e-03e98fc56a3b  
splash=silent  
mitigations=auto  
quiet  
security=apparmor

15. cpupower frequency-info

analyzing CPU 254:  
current policy: frequency should be within 800 MHz and 4.10 GHz.  
The governor "powersave" may decide which speed to use within this range.  
boost state support:  
Supported: yes  
Active: yes

16. 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   |

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

**Fsas Technologies Inc.**

(Test Sponsor: Fujitsu)

**SPECrate®2017\_fp\_base = 2360**

**PRIMERGY RX4770 M8, Intel Xeon 6748P, 2.50GHz**

**SPECrate®2017\_fp\_peak = Not Run**

**CPU2017 License:** 19

**Test Sponsor:** Fujitsu

**Tested by:** Fsas Technologies Inc.

**Test Date:** Dec-2025

**Hardware Availability:** Dec-2025

**Software Availability:** Jun-2025

## Platform Notes (Continued)

```
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
```

```
-----
17. /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
-----
```

```
-----
18. /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
-----
```

```
-----
19. OS release
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP7
-----
```

```
-----
20. Disk information
SPEC is set to: /mnt/ramdisk/speccpu-24.1
Filesystem      Type  Size  Used Avail Use% Mounted on
tmpfs           tmpfs 380G  7.9G 373G   3% /mnt/ramdisk
-----
```

```
-----
21. /sys/devices/virtual/dmi/id
Vendor:         Fsas Technologies
Product:        PRIMERGY RX4770 M8
Product Family: SERVER
Serial:         xxxxxxxxxx
-----
```

```
-----
22. dmidecode
Additional information from dmidecode 3.6 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:
  32x Micron MTC40F2046S1RC64BD2 MWFF 64 GB 2 rank 6400
-----
```

```
-----
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor:     Fsas Technologies
BIOS Version:    V1.0.0.0 R1.0.0 for D4136-A1x
BIOS Date:       10/28/2025
-----
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

**Fsas Technologies Inc.**

(Test Sponsor: Fujitsu)

**SPECrate®2017\_fp\_base = 2360**

**PRIMERGY RX4770 M8, Intel Xeon 6748P, 2.50GHz**

**SPECrate®2017\_fp\_peak = Not Run**

**CPU2017 License:** 19

**Test Sponsor:** Fujitsu

**Tested by:** Fsas Technologies Inc.

**Test Date:** Dec-2025

**Hardware Availability:** Dec-2025

**Software Availability:** Jun-2025

## Platform Notes (Continued)

BIOS Revision: 1.0  
Firmware Revision: 3.6

## 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 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 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 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 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 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 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 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
-----

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

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 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 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
-----



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

**Fsas Technologies Inc.**

(Test Sponsor: Fujitsu)

**SPECrate®2017\_fp\_base = 2360**

**PRIMERGY RX4770 M8, Intel Xeon 6748P, 2.50GHz**

**SPECrate®2017\_fp\_peak = Not Run**

**CPU2017 License:** 19

**Test Sponsor:** Fujitsu

**Tested by:** Fsas Technologies Inc.

**Test Date:** Dec-2025

**Hardware Availability:** Dec-2025

**Software Availability:** Jun-2025

## 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

## Base Optimization Flags

C benchmarks:

-w -std=c11 -m64 -Wl,-z,muldefs -xsapfirerapids -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

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

**Fsas Technologies Inc.**

(Test Sponsor: Fujitsu)

**SPECrate®2017\_fp\_base = 2360**

**SPECrate®2017\_fp\_peak = Not Run**

**PRIMERGY RX4770 M8, Intel Xeon 6748P, 2.50GHz**

**CPU2017 License:** 19

**Test Sponsor:** Fujitsu

**Tested by:** Fsas Technologies Inc.

**Test Date:** Dec-2025

**Hardware Availability:** Dec-2025

**Software Availability:** Jun-2025

## Base Optimization Flags (Continued)

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
```

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

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.html>

<http://www.spec.org/cpu2017/flags/Fsas-Platform-Settings-V1.0-GNR-RevB.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/Fsas-Platform-Settings-V1.0-GNR-RevB.xml>

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](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.9 on 2025-12-04 21:47:49-0500.

Report generated on 2026-01-14 13:46:38 by CPU2017 PDF formatter v6716.

Originally published on 2026-01-13.