SPEC CPU®2017 Floating Point Rate Result

Fsas Technologies Inc.
(Test Sponsor: Fujitsu)

PRIMEQUEST 4400E, Intel Xeon Platinum 8580, 2.00GHz

$SPECrate®2017\_fp\_base =$ 1170

$SPECrate®2017\_fp\_peak =$ Not Run

CPU2017 License: 19	**Test Date:** Jan-2026
Test Sponsor: Fujitsu	**Hardware Availability:** Mar-2026
Tested by: Fsas Technologies Inc.	**Software Availability:** May-2025

Copies

Benchmark	Copies	Result
503.bwaves_r	240	4710
507.cactuBSSN_r	240	1220
508.namd_r	240	804
510.parest_r	240	718
511.povray_r	240	1250
519.lbm_r	240	436
521.wrf_r	240	757
526.blender_r	240	1200
527.cam4_r	240	1320
538.imagick_r	240	4710
544.nab_r	240	2460
549.fotonik3d_r	240	624
554.roms_r	240	469

SPECrate®2017_fp_base (1170)

Hardware

CPU Name: Intel Xeon Platinum 8580
 Max MHz: 4000
 Nominal: 2000
Enabled: 120 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: 300 MB I+D on chip per chip
 Other: None
Memory: 1 TB (16 x 64 GB 2Rx4 PC5-5600B-R)
Storage: 1 x 960 GB M.2 SATA SSD
Other: CPU Cooling: Air

Software

OS: Red Hat Enterprise Linux 9.6 (Plow)
5.14.0-570.12.1.el9_6.x86_64
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: Fujitsu BIOS Version V1.0.0.0 R2.9.0 for D3986-A1x. Released Mar-2026
File System: xfs
System State: Run level 5 (multi-user with GUI)
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

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

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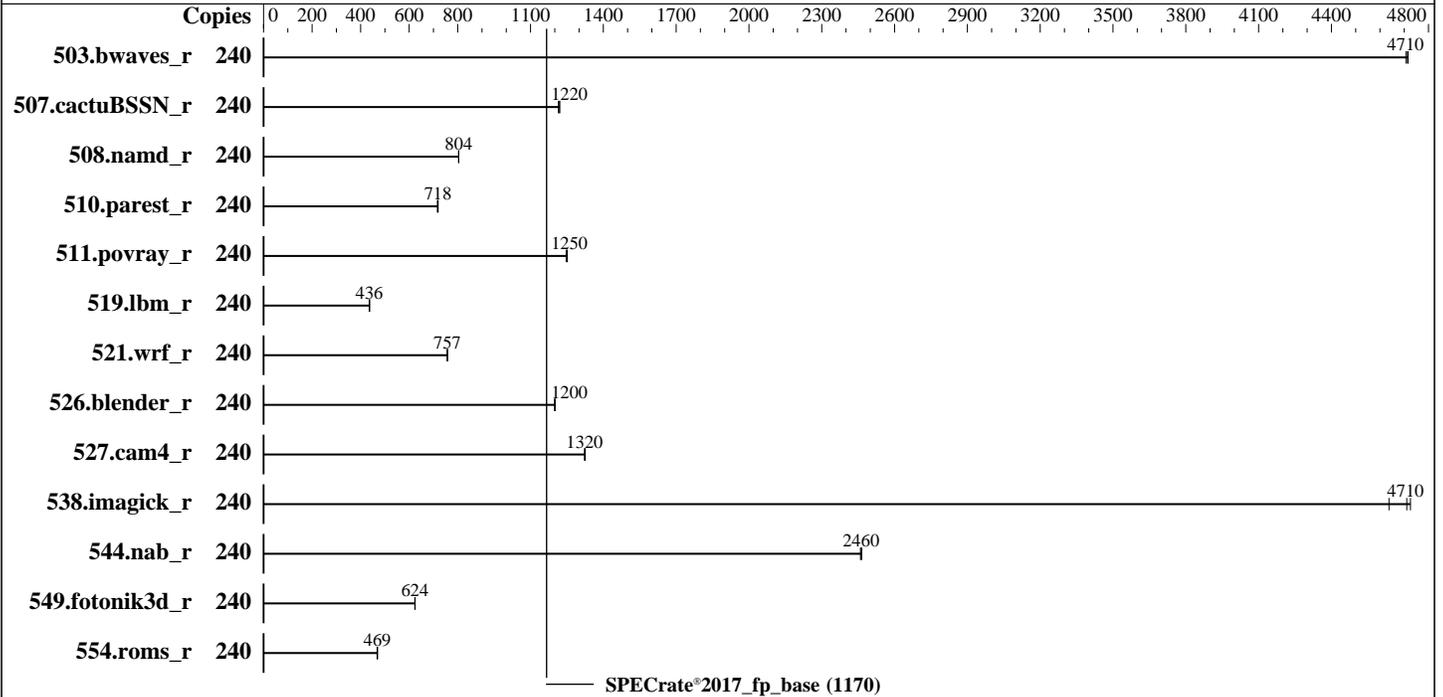Copyright 2017-2026 Standard Performance Evaluation Corporation

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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	240	511	4710	510	4720	**511**	**4710**							
507.cactuBSSN_r	240	249	1220	**249**	**1220**	250	1210							
508.namd_r	240	283	804	**284**	**804**	284	804							
510.parest_r	240	877	716	**874**	**718**	873	719							
511.povray_r	240	448	1250	449	1250	**448**	**1250**							
519.lbm_r	240	580	436	580	436	**580**	**436**							
521.wrf_r	240	**710**	**757**	710	758	710	757							
526.blender_r	240	**305**	**1200**	305	1200	304	1200							
527.cam4_r	240	317	1330	317	1320	**317**	**1320**							
538.imagick_r	240	129	4640	**127**	**4710**	126	4730							
544.nab_r	240	164	2460	**164**	**2460**	164	2460							
549.fotonik3d_r	240	**1500**	**624**	1500	623	1497	625							
554.roms_r	240	813	469	815	468	**813**	**469**							

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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/benchmark/cpu2017/lib/intel64:/home/benchmark/cpu2017/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.
```

(Continued on next page)

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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:
Intel Virtualization Technology = Disabled
Utilization Profile = Unbalanced
CPU Performance Boost = Aggressive
SNC (Sub NUMA) = Enable SNC2

Sysinfo program /home/benchmark/cpu2017/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost.localdomain Fri Jan 23 01:04:26 2026

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 252 (252-51.el9)
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. tuned-adm active
17. sysctl
18. /sys/kernel/mm/transparent_hugepage
19. /sys/kernel/mm/transparent_hugepage/khugepaged
20. OS release
21. Disk information
22. /sys/devices/virtual/dmi/id
23. dmidecode
24. BIOS
------------------------------------------------------------


------------------------------------------------------------
1. uname -a
  Linux localhost.localdomain 5.14.0-570.12.1.el9_6.x86_64 #1 SMP PREEMPT_DYNAMIC Fri Apr 4 10:41:31 EDT 2025
  x86_64 x86_64 x86_64 GNU/Linux


------------------------------------------------------------
2. w
   01:04:26 up 11:48,  2 users,  load average: 48.27, 173.11, 213.99
```

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Test Date: Jan-2026

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Platform Notes (Continued)

```
    USER      TTY       LOGIN@   IDLE   JCPU   PCPU WHAT
    root     seat0     13:18    0.00s  0.00s  0.00s /usr/libexec/gdm-wayland-session --register-session
    gnome-session
    root     tty2      13:18   11:48m  0.05s  0.05s /usr/libexec/gnome-session-binary

    ----------------------------------------------------------
    3. Username
      From environment variable $USER:  root


    ----------------------------------------------------------
    4. ulimit -a
      real-time non-blocking time  (microseconds, -R) unlimited
      core file size              (blocks, -c) unlimited
      data seg size               (kbytes, -d) unlimited
      scheduling priority             (-e) 0
      file size                   (blocks, -f) unlimited
      pending signals                 (-i) 4124572
      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) 4124572
      virtual memory              (kbytes, -v) unlimited
      file locks                      (-x) unlimited

    ----------------------------------------------------------
    5. sysinfo process ancestry
     /usr/lib/systemd/systemd rhgb --switched-root --system --deserialize 31
     /usr/lib/systemd/systemd --user
     /usr/libexec/gnome-terminal-server
     bash
     bash
     runcpu --nobuild --action validate --define default-platform-flags --define numcopies=240 -c
       ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=120 --define physicalfirst
       --define invoke_with_interleave --define drop_caches --tune base -o all fprate
     runcpu --nobuild --action validate --define default-platform-flags --define numcopies=240 --configfile
       ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=120 --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/templogs/preenv.fprate.001.0.log --lognum 001.0 --from_runcpu 2
     specperl $SPEC/bin/sysinfo
     $SPEC = /home/benchmark/cpu2017


    ----------------------------------------------------------
    6. /proc/cpuinfo
        model name      : INTEL(R) XEON(R) PLATINUM 8580
        vendor_id       : GenuineIntel
        cpu family      : 6
        model           : 207
        stepping        : 2
        microcode       : 0x210002b3
        bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb bhi
        cpu cores       : 60
        siblings        : 120
        2 physical ids (chips)
        240 processors (hardware threads)
```

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Platform Notes (Continued)

```
    physical id 0: core ids 0-59
    physical id 1: core ids 0-59
    physical id 0: apicids 0-119
    physical id 1: apicids 128-247
  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 2.37.4:
    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):                               240
    On-line CPU(s) list:                  0-239
    Vendor ID:                            GenuineIntel
    BIOS Vendor ID:                       Intel(R) Corporation
    Model name:                           INTEL(R) XEON(R) PLATINUM 8580
    BIOS Model name:                      INTEL(R) XEON(R) PLATINUM 8580
    CPU family:                           6
    Model:                                207
    Thread(s) per core:                   2
    Core(s) per socket:                   60
    Socket(s):                            2
    Stepping:                             2
    CPU(s) scaling MHz:                   20%
    CPU max MHz:                          4000.0000
    CPU min MHz:                          800.0000
    BogoMIPS:                             4000.00
    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 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 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 avx_vnni avx512_bf16 wbnoinvd dtherm ida arat pln
                                          pts hwp hwp_act_window hwp_epp hwp_pkg_req 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
    L1d cache:                            5.6 MiB (120 instances)
    L1i cache:                            3.8 MiB (120 instances)
    L2 cache:                             240 MiB (120 instances)
    L3 cache:                             600 MiB (2 instances)
    NUMA node(s):                         4
    NUMA node0 CPU(s):                    0-29,120-149
    NUMA node1 CPU(s):                    30-59,150-179
    NUMA node2 CPU(s):                    60-89,180-209
    NUMA node3 CPU(s):                    90-119,210-239
    Vulnerability Gather data sampling:   Not affected
```

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Platform Notes (Continued)

```
  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;
                                        PBRSB-eIBRS SW sequence; 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     5.6M  12 Data            1     64        1             64
    L1i       32K     3.8M   8 Instruction     1     64        1             64
    L2         2M     240M  16 Unified         2   2048        1             64
    L3       300M     600M  20 Unified         3 245760        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: 0-29,120-149
  node 0 size: 257172 MB
  node 0 free: 254710 MB
  node 1 cpus: 30-59,150-179
  node 1 size: 258032 MB
  node 1 free: 255864 MB
  node 2 cpus: 60-89,180-209
  node 2 size: 258032 MB
  node 2 free: 255705 MB
  node 3 cpus: 90-119,210-239
  node 3 size: 257971 MB
  node 3 free: 255820 MB
  node distances:
  node    0    1    2    3
    0:   10   12   21   21
    1:   12   10   21   21
    2:   21   21   10   12
    3:   21   21   12   10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:     1055958104 kB

------------------------------------------------------------
10. who -r
  run-level 5 Jan 22 13:16

------------------------------------------------------------
11. Systemd service manager version: systemd 252 (252-51.el9)
  Default Target  Status
  graphical       degraded

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

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Platform Notes (Continued)

```
      UNIT                 LOAD   ACTIVE SUB     DESCRIPTION
 * dnf-makecache.service loaded failed failed dnf makecache
 * 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         ModemManager NetworkManager NetworkManager-dispatcher NetworkManager-wait-online
                   accounts-daemon atd auditd avahi-daemon bluetooth crond cups dbus-broker firewalld gdm
                   getty@ insights-client-boot irqbalance iscsi-onboot iscsi-starter kdump libstoragemgmt
                   lm_sensors low-memory-monitor lvm2-monitor mcelog mdmonitor microcode multipathd
                   nis-domainname nvmefc-boot-connections ostree-remount pmcd pmie pmlogger qemu-guest-agent
                   rhsmcertd rsyslog rtkit-daemon selinux-autorelabel-mark sep5 smartd sshd sssd
                   switcheroo-control sysstat systemd-boot-update systemd-network-generator systemd-pstore
                   tuned udisks2 upower vgauthd vmtoolsd
   enabled-runtime systemd-remount-fs
   disabled        arp-ethers blk-availability brltty canberra-system-bootup canberra-system-shutdown
                   canberra-system-shutdown-reboot chrony-wait chronyd chronyd-restricted cni-dhcp
                   console-getty cpupower cups-browsed dbus-daemon debug-shell dnf-system-upgrade dnsmasq
                   fancontrol grafana-server iprdump iprinit iprupdate iscsi-init iscsid iscsiuio kpatch
                   kvm_stat ledmon lvm-devices-import man-db-restart-cache-update netavark-dhcp-proxy
                   netavark-firewalld-reload nftables nvmf-autoconnect ostree-readonly-sysroot-migration
                   ostree-state-overlay@ pcp-geolocate pesign pmfind pmie_farm pmlogger_farm pmproxy podman
                   podman-auto-update podman-clean-transient podman-kube@ podman-restart postfix powertop
                   psacct ras-mc-ctl rasdaemon rdisc rhcd rhsm rhsm-facts rpmdb-rebuild rrdcached
                   selinux-check-proper-disable serial-getty@ speech-dispatcherd sshd-keygen@
                   systemd-boot-check-no-failures systemd-sysext trace-cmd tuned-ppd wpa_supplicant
   indirect        iscsi spice-vdagentd sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo
                   systemd-sysupdate systemd-sysupdate-reboot

   ----------------------------------------------------------
14. Linux kernel boot-time arguments, from /proc/cmdline
   BOOT_IMAGE=(hd0,gpt2)/vmlinuz-5.14.0-570.12.1.el9_6.x86_64
   root=/dev/mapper/rhel-root
   ro
   crashkernel=1G-4G:192M,4G-64G:256M,64G-:512M
   resume=/dev/mapper/rhel-swap
   rd.lvm.lv=rhel/root
   rd.lvm.lv=rhel/swap
   rhgb
   quiet

   ----------------------------------------------------------
15. cpupower frequency-info
   analyzing CPU 227:
     current policy: frequency should be within 800 MHz and 4.00 GHz.
                     The governor "powersave" may decide which speed to use
                     within this range.
   boost state support:
     Supported: yes
     Active: yes

   ----------------------------------------------------------
16. tuned-adm active
   Current active profile: balanced

   ----------------------------------------------------------
17. sysctl
   kernel.numa_balancing             1
   kernel.randomize_va_space         2
```

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Platform Notes (Continued)

```
   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


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


   -------------------------------------------------------------
19. /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


   -------------------------------------------------------------
20. OS release
   From /etc/*-release /etc/*-version
   os-release     Red Hat Enterprise Linux 9.6 (Plow)
   redhat-release Red Hat Enterprise Linux release 9.6 (Plow)
   system-release Red Hat Enterprise Linux release 9.6 (Plow)


   -------------------------------------------------------------
21. Disk information
SPEC is set to: /home/benchmark/cpu2017
   Filesystem            Type  Size  Used Avail Use% Mounted on
   /dev/mapper/rhel-home xfs   819G   27G  792G   4% /home


   -------------------------------------------------------------
22. /sys/devices/virtual/dmi/id
   Vendor:         FUJITSU
   Product:        PRIMEQUEST 4400E
   Product Family: SERVER
   Serial:         xxxxxxxxxx


   -------------------------------------------------------------
23. 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
```

(Continued on next page)

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Platform Notes (Continued)

```
   "DMTF SMBIOS" standard.
   Memory:
     16x Samsung M321R8GA0PB0-CWMXH 64 GB 2 rank 5600


   --------------------------------------------------------------
 24. BIOS
 (This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor:       FUJITSU
   BIOS Version:      V1.0.0.0 R2.9.0 for D3986-A1x
   BIOS Date:         08/22/2025
   BIOS Revision:     2.9
   Firmware Revision: 1.91
```

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
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------------------------------------------------------------------------------


==============================================================================
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
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------------------------------------------------------------------------------


==============================================================================
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
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Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
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Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
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------------------------------------------------------------------------------


==============================================================================
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
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------------------------------------------------------------------------------


==============================================================================
Fortran, C    | 521.wrf_r(base) 527.cam4_r(base)
```

(Continued on next page)

SPEC CPU®2017 Floating Point Rate Result

Fsas Technologies Inc.
(Test Sponsor: Fujitsu)
PRIMEQUEST 4400E, Intel Xeon Platinum 8580, 2.00GHz

SPECrate®2017_fp_base = 1170

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fsas Technologies Inc.

Test Date: Jan-2026
Hardware Availability: Mar-2026
Software Availability: May-2025

Compiler Version Notes (Continued)

```
----------------------------------------------------------------------------
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.
----------------------------------------------------------------------------
```

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`

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

SPEC CPU®2017 Floating Point Rate Result
Copyright 2017-2026 Standard Performance Evaluation Corporation

Fsas Technologies Inc.
(Test Sponsor: Fujitsu)
PRIMEQUEST 4400E, Intel Xeon Platinum 8580, 2.00GHz

SPECrate®2017_fp_base = 1170

SPECrate®2017_fp_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fsas Technologies Inc.

Test Date: Jan-2026
Hardware Availability: Mar-2026
Software Availability: May-2025

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
```

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/Fujitsu-Platform-Settings-V1.0-EMR-RevD.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/Fujitsu-Platform-Settings-V1.0-EMR-RevD.xml

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SPEC CPU®2017 Floating Point Rate Result
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Fsas Technologies Inc.
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PRIMEQUEST 4400E, Intel Xeon Platinum 8580, 2.00GHz

$SPECrate^{®}2017\_fp\_base =$ 1170

$SPECrate^{®}2017\_fp\_peak =$ Not Run

CPU2017 License: 19		**Test Date:**	Jan-2026
Test Sponsor:	Fujitsu	**Hardware Availability:**	Mar-2026
Tested by:	Fsas Technologies Inc.	**Software Availability:**	May-2025

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

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