SPEC CPU®2026 Floating Point Speed Result

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Supermicro

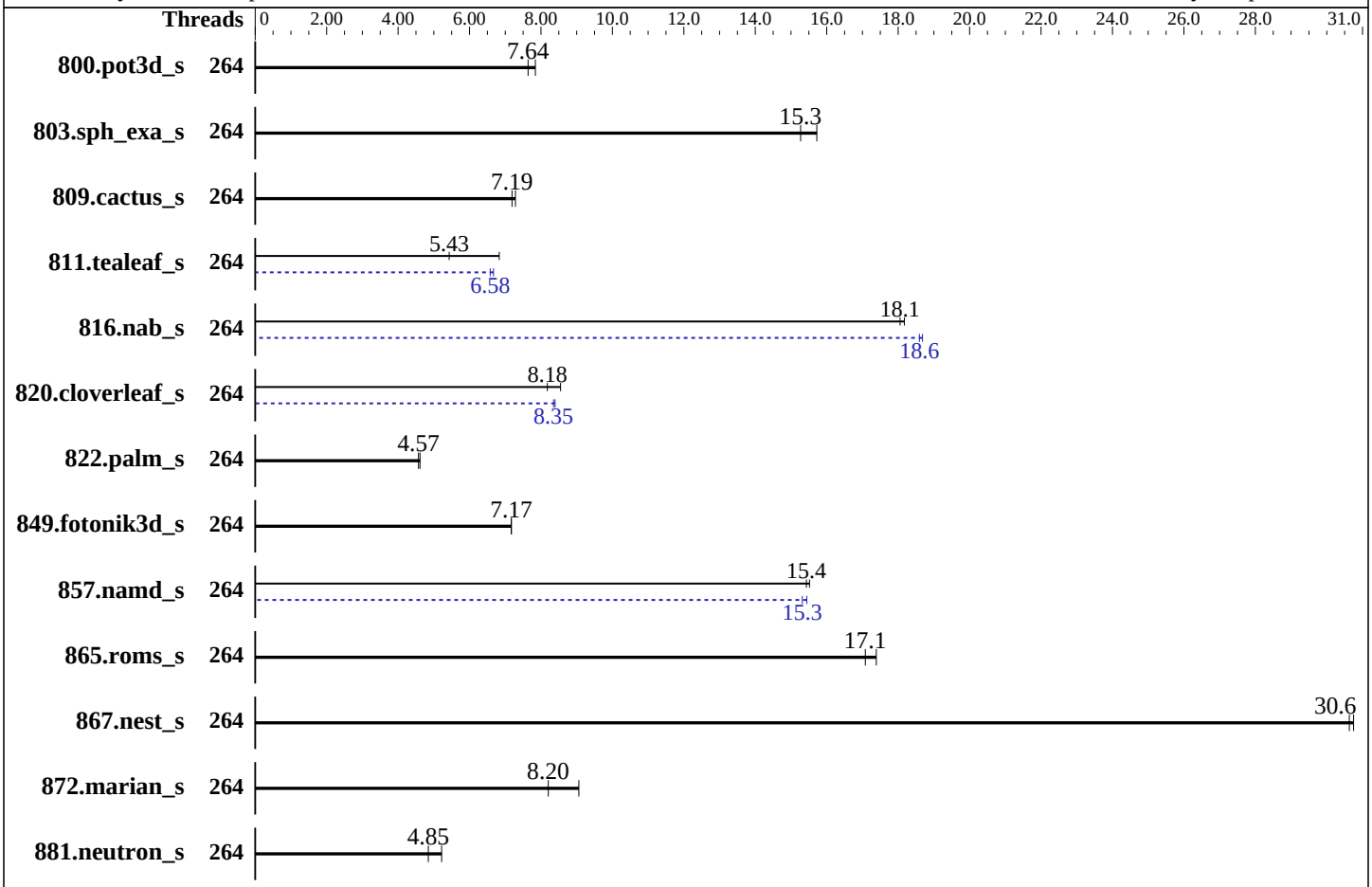
SuperServer SYS-112HA-TN
(X14SBH-AP , Intel Xeon 6980E+)

SPECspeed®2026_fp_base = 9.74

SPECspeed®2026_fp_peak = 9.91

CPU2026 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2026
Hardware Availability: Jun-2026
Software Availability: Apr-2026



Hardware

CPU Name:	Intel Xeon 6980E+
Max MHz:	3200
Nominal:	2100
Enabled:	264 cores, 1 chip
Orderable:	1 chip
Cache L1:	64 KB I + 32 KB D on chip per core
L2:	264 MB I+D on chip per chip, 4 MB shared / 4 cores
L3:	528 MB I+D on chip per chip
Other:	None
Memory:	1152 GB (12 x 96 GB 2Rx4 PC5-8000B-R)
Storage:	1 x 480 GB NVMe SSD
Cooling:	Air
Other:	None

Software

OS:	Red Hat Enterprise Linux 9.7 Kernel 5.14.0-611.5.1.el9_7.x86_64
Compiler:	C/C++: Version 2026.0 of Intel oneAPI DPC++/C++ Compiler for Linux; Fortran: Version 2026.0 of Intel Fortran Compiler for Linux
Compiler Category:	Vendor
Firmware:	Version 1.5b released May-2026
File System:	xfs
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	jemalloc memory allocator V5.3.0
Power Management:	BIOS and OS set to prefer performance at the cost of additional power usage.

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Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
800.pot3d_s	264	85.8	7.84	**88.1**	**7.64**			264	85.8	7.84	**88.1**	**7.64**		
803.sph_exa_s	264	**81.1**	**15.3**	78.7	15.7			264	**81.1**	**15.3**	78.7	15.7		
809.cactus_s	264	154	7.28	**156**	**7.19**			264	154	7.28	**156**	**7.19**		
811.tealeaf_s	264	81.5	6.83	**103**	**5.43**			264	**84.7**	**6.58**	83.5	6.67		
816.nab_s	264	62.0	18.2	**62.4**	**18.1**			264	**60.6**	**18.6**	60.3	18.7		
820.cloverleaf_s	264	100	8.55	**105**	**8.18**			264	102	8.40	**103**	**8.35**		
822.palm_s	264	**269**	**4.57**	266	4.61			264	**269**	**4.57**	266	4.61		
849.fotonik3d_s	264	92.0	7.17	**92.0**	**7.17**			264	92.0	7.17	**92.0**	**7.17**		
857.namd_s	264	93.6	15.5	**94.1**	**15.4**			264	94.0	15.4	**94.8**	**15.3**		
865.roms_s	264	**63.8**	**17.1**	62.7	17.4			264	**63.8**	**17.1**	62.7	17.4		
867.nest_s	264	70.2	30.7	**70.5**	**30.6**			264	70.2	30.7	**70.5**	**30.6**		
872.marian_s	264	119	9.06	**132**	**8.20**			264	119	9.06	**132**	**8.20**		
881.neutron_s	264	156	5.22	**168**	**4.85**			264	156	5.22	**168**	**4.85**		

SPECspeed®2026_fp_base = 9.74

SPECspeed®2026_fp_peak = 9.91

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

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/cpu2026/lib"
MALLOC_CONF = "retain:true"
OMP_STACKSIZE = "192M"
```

General Notes

```
Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM
memory using CentOS Stream 9.
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

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1)
is mitigated in the system as tested and documented.
```

(Continued on next page)

General Notes (Continued)

```
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 CentOS Stream 9, and the system compiler gcc 11.5.0
 sources available from jemalloc.net or https://github.com/jemalloc/jemalloc/releases
```

Platform Notes

```
BIOS settings:
Workload Profile = HPC
KTI Prefetch = Enable
Stale AtoS = Disable
LLC Dead Line Alloc = Disable

 Sysinfo program /home/cpu2026/bin/sysinfo
 Rev: 779ab21020787073335a329f3a45e2cd
 running on  Sat May 23 09:25:44 2026

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

 ------------------------------------------------------------
 Table of contents
 ------------------------------------------------------------
  1. uname -srvm
  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 (252-55.el9)
 12. Services, from systemctl list-unit-files
 13. Linux kernel boot-time arguments, from /proc/cmdline
 14. cpupower frequency-info
 15. tuned-adm active
 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)

Platform Notes (Continued)

```
------------------------------------------------------------

------------------------------------------------------------
1. uname -srvm
  Linux 5.14.0-611.5.1.el9_7.x86_64 #1 SMP PREEMPT_DYNAMIC Fri Oct 17 14:16:35 EDT 2025 x86_64

------------------------------------------------------------
2. w
   09:25:44 up 16:27,  1 user,  load average: 74.46, 70.00, 47.76
  USER     TTY        LOGIN@   IDLE   JCPU   PCPU WHAT
  root     tty1      Fri16   16:16m  1.32s  0.00s -bash

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

------------------------------------------------------------
4. ulimit -a
  real-time non-blocking time  (microseconds, -R) unlimited
  core file size              (blocks, -c) 0
  data seg size               (kbytes, -d) unlimited
  scheduling priority                 (-e) 0
  file size                   (blocks, -f) unlimited
  pending signals                     (-i) 4640021
  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) 4640021
  virtual memory              (kbytes, -v) unlimited
  file locks                          (-x) unlimited

------------------------------------------------------------
5. sysinfo process ancestry
 /usr/lib/systemd/systemd rhgb --switched-root --system --deserialize 31
 login -- root
 -bash
 -bash
 runcpu --nobuild --reportable --action validate --define default-platform-flags -c
   ic2026.0-clearwaterforest-cpu2026-1.0.1-speed-20260429.cfg --threads 264 --define cores=264 --tune
    base,peak -o all --define smt-on --define drop_caches fpspeed
 runcpu --nobuild --reportable --action validate --define default-platform-flags --configfile
   ic2026.0-clearwaterforest-cpu2026-1.0.1-speed-20260429.cfg --threads 264 --define cores=264 --tune
```

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Platform Notes (Continued)

```
   base,peak --output_format all --define smt-on --define drop_caches --nopower --runmode speed --tune
    base:peak --size refspeed fpspeed --nopreenv --note-preenv --logfile
    $SPEC/tmp/CPU2026.004/templogs/preenv.fpspeed.004.0.log --lognum 004.0 --from_runcpu 2
  specperl $SPEC/bin/sysinfo
 $SPEC = /home/cpu2026

------------------------------------------------------------
 6. /proc/cpuinfo
     model name      : Intel(R) Xeon(R) 6980E+
     vendor_id       : GenuineIntel
     cpu family      : 6
     model           : 221
     stepping        : 1
     microcode       : 0x1000120
     bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi spectre_v2_user
     cpu cores       : 264
     siblings        : 264
     1 physical ids (chips)
     264 processors (hardware threads)
     physical id 0: core ids 0-87,128-215,256-343
     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
    ,74,76,78,80,82,84,86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,118,120,122,124,126,128,130,1
    32,134,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,170,172,174,256,258,260,262,26
    4,266,268,270,272,274,276,278,280,282,284,286,288,290,292,294,296,298,300,302,304,306,308,310,312,314,316
    ,318,320,322,324,326,328,330,332,334,336,338,340,342,344,346,348,350,352,354,356,358,360,362,364,366,368,
    370,372,374,376,378,380,382,384,386,388,390,392,394,396,398,400,402,404,406,408,410,412,414,416,418,420,4
    22,424,426,428,430,512,514,516,518,520,522,524,526,528,530,532,534,536,538,540,542,544,546,548,550,552,55
    4,556,558,560,562,564,566,568,570,572,574,576,578,580,582,584,586,588,590,592,594,596,598,600,602,604,606
    ,608,610,612,614,616,618,620,622,624,626,628,630,632,634,636,638,640,642,644,646,648,650,652,654,656,658,
     660,662,664,666,668,670,672,674,676,678,680,682,684,686
   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:                        52 bits physical, 48 bits virtual
   Byte Order:                           Little Endian
   CPU(s):                               264
   On-line CPU(s) list:                  0-263
   Vendor ID:                            GenuineIntel
   BIOS Vendor ID:                       Intel(R) Corporation
   Model name:                           Intel(R) Xeon(R) 6980E+
```

(Continued on next page)

Platform Notes (Continued)

```
   BIOS Model name:                      Intel(R) Xeon(R) 6980E+
   CPU family:                           6
   Model:                                221
   Thread(s) per core:                   1
   Core(s) per socket:                   264
   Socket(s):                            1
   Stepping:                             1
   BogoMIPS:                             4200.00
  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 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 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 rdseed adx smap clflushopt clwb
                                         intel_pt sha_ni xsaveopt xsavec xgetbv1 xsaves cqm_llc
                                         cqm_occup_llc cqm_mbm_total cqm_mbm_local split_lock_detect
                                         user_shstk avx_vnni lam wbnoinvd dtherm ida arat pln pts vnmi umip
                                         pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid bus_lock_detect
                                         cldemote movdiri movdir64b enqcmd fsrm md_clear serialize pconfig
                                         arch_lbr ibt flush_l1d arch_capabilities
   Virtualization:                       VT-x
   L1d cache:                            8.3 MiB (264 instances)
   L1i cache:                            16.5 MiB (264 instances)
   L2 cache:                             264 MiB (66 instances)
   L3 cache:                             528 MiB (1 instance)
   NUMA node(s):                         3
   NUMA node0 CPU(s):                    0-87
   NUMA node1 CPU(s):                    88-175
   NUMA node2 CPU(s):                    176-263
   Vulnerability Gather data sampling:   Not affected
   Vulnerability Indirect target selection: 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
```

(Continued on next page)

Platform Notes (Continued)

```
  Vulnerability Spectre v2:             Mitigation; Enhanced / Automatic IBRS; IBPB conditional;
                                              PBRSB-eIBRS Not affected; BHI BHI_DIS_S
  Vulnerability Srbds:                  Not affected
  Vulnerability Tsa:                    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       32K     8.3M    8 Data            1     64        1             64
     L1i       64K    16.5M    8 Instruction     1    128        1             64
     L2         4M     264M   16 Unified         2   4096        1             64
     L3       528M     528M   16 Unified         3 540672        1             64

------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 3 nodes (0-2)
  node 0 cpus: 0-87
  node 0 size: 386041 MB
  node 0 free: 312907 MB
  node 1 cpus: 88-175
  node 1 size: 387049 MB
  node 1 free: 381687 MB
  node 2 cpus: 176-263
  node 2 size: 386978 MB
  node 2 free: 381482 MB
  node distances:
  node     0    1    2
     0:   10   15   17
     1:   15   10   15
     2:   17   15   10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       1187911120 kB

------------------------------------------------------------
10. who -r
  run-level 3 May 22 16:58

------------------------------------------------------------
11. Systemd service manager version: systemd 252 (252-55.el9)
  Default Target  Status
  multi-user      running

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


(Continued on next page)

Platform Notes (Continued)

```
   STATE             UNIT FILES
   enabled             ModemManager NetworkManager NetworkManager-dispatcher NetworkManager-wait-online
                     accounts-daemon atd auditd avahi-daemon bluetooth chronyd crond cups dbus-broker firewalld
                     gdm getty@ insights-client-boot irqbalance iscsi-onboot iscsi-starter kdump libstoragemgmt
                      low-memory-monitor lvm2-monitor mcelog mdmonitor microcode multipathd nis-domainname
                     nvmefc-boot-connections ostree-remount qemu-guest-agent rhsmcertd rsyslog rtkit-daemon
                      selinux-autorelabel-mark smartd sshd sssd switcheroo-control 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-restricted cni-dhcp console-getty
                     cpupower cups-browsed dbus-daemon debug-shell dnf-system-upgrade dnsmasq 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@ podman
                     podman-auto-update podman-clean-transient podman-kube@ podman-restart psacct ras-mc-ctl
                      rasdaemon rdisc rhcd rhsm rhsm-facts rpmdb-rebuild selinux-check-proper-disable
                      serial-getty@ speech-dispatcherd sshd-keygen@ systemd-boot-check-no-failures
                        systemd-sysext 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

------------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=(hd0,gpt2)/vmlinuz-5.14.0-611.5.1.el9_7.x86_64
  root=/dev/mapper/rhel_135--180--133-root
  ro
  resume=/dev/mapper/rhel_135--180--133-swap
  rd.lvm.lv=rhel_135-180-133/root
  rd.lvm.lv=rhel_135-180-133/swap
  rhgb
  quiet
  crashkernel=1G-2G:192M,2G-64G:256M,64G-:512M

------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 178:
    Unable to determine current policy
    boost state support:
      Supported: yes
      Active: yes

------------------------------------------------------------
15. tuned-adm active
  Current active profile: throughput-performance

------------------------------------------------------------
```

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Platform Notes (Continued)

```
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                     40
  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                      10
  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+madvise [madvise] never
  enabled         [always] madvise 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     Red Hat Enterprise Linux 9.7 (Plow)
  redhat-release Red Hat Enterprise Linux release 9.7 (Plow)
  system-release Red Hat Enterprise Linux release 9.7 (Plow)

------------------------------------------------------------
20. Disk information
```

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Platform Notes (Continued)

```
 SPEC is set to: /home/cpu2026
   Filesystem                          Type  Size  Used Avail Use% Mounted on
   /dev/mapper/rhel_135--180--133-home xfs   372G  105G  268G  29% /home

 ------------------------------------------------------------
 21. /sys/devices/virtual/dmi/id
     Vendor:         Supermicro
     Product:        Super Server
     Product Family: Family
     Serial:         0123456789

 ------------------------------------------------------------
 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:
      12x SK Hynix HMCGM4AMBRB970N 96 GB 2 rank 8000


 ------------------------------------------------------------
 23. BIOS
 (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:       American Megatrends International, LLC.
    BIOS Version:      1.5b
    BIOS Date:         05/04/2026
    BIOS Revision:     5.35
```

Compiler Version Notes

```
==============================================================================
C       | 811.tealeaf_s(base, peak) 816.nab_s(base, peak) 881.neutron_s(base,
        | peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2026.0.0 Build 20260331
Copyright (C) 1985-2026 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
C++     | 803.sph_exa_s(base, peak) 857.namd_s(base, peak) 867.nest_s(base,
        | peak) 872.marian_s(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2026.0.0 Build 20260331
```

(Continued on next page)

Compiler Version Notes (Continued)

```
Copyright (C) 1985-2026 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
C++, C  | 809.cactus_s(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2026.0.0 Build 20260331
Copyright (C) 1985-2026 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
Fortran | 800.pot3d_s(base, peak) 820.cloverleaf_s(base, peak)
        | 822.palm_s(base, peak) 849.fotonik3d_s(base, peak) 865.roms_s(base,
        | peak)
------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version
  2026.0.0 Build 20260331
Copyright (C) 1985-2026 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

Benchmarks using both C and C++:
icpx icx

Base Optimization Flags

C benchmarks:
-m64 -std=c18 -Wl,-z,muldefs -Wl,-plugin-opt=-inline-threshold=1500
-xclearwaterforest -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

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Base Optimization Flags (Continued)

C++ benchmarks:
-m64 -std=c++17 -Wl,-z,muldefs -Wl,-plugin-opt=-inline-threshold=1500
-xclearwaterforest -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -pthread -fiopenmp
-DSPEC_OPENMP -L/usr/local/jemalloc-5.3.0/lib -ljemalloc

Fortran benchmarks:
-m64 -stand f18 -Wl,-z,muldefs -Wl,-plugin-opt=-inline-threshold=1500
-xclearwaterforest -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -DSPEC_OPENMP -fiopenmp
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

Benchmarks using both C and C++:
-m64 -std=c++17 -std=c18 -Wl,-z,muldefs
-Wl,-plugin-opt=-inline-threshold=1500 -xclearwaterforest -O3
-ffp-model=fast -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP -pthread
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

Peak Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

Benchmarks using both C and C++:
icpx icx

Peak Optimization Flags

C benchmarks:

811.tealeaf_s: -m64 -std=c18 -Wl,-z,muldefs
-Wl,-plugin-opt=-inline-threshold=1500
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-ffp-model=fast -xclearwaterforest(pass 2) -flto

(Continued on next page)

Peak Optimization Flags (Continued)

811.tealeaf_s (continued):
-qopt-mem-layout-trans=4 -O3 -mfpmath=sse -funroll-loops
-fiopenmp -DSPEC_OPENMP -L/usr/local/jemalloc-5.3.0/lib
-ljemalloc

816.nab_s: Same as 811.tealeaf_s

881.neutron_s: basepeak = yes

C++ benchmarks:

803.sph_exa_s: basepeak = yes

857.namd_s: -m64 -std=c++17 -Wl,-z,muldefs
-Wl,-plugin-opt=-inline-threshold=1500
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-ffp-model=fast -xclearwaterforest(pass 2) -flto
-qopt-mem-layout-trans=4 -O3 -mfpmath=sse -funroll-loops
-pthread -fiopenmp -DSPEC_OPENMP
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

867.nest_s: basepeak = yes

872.marian_s: basepeak = yes

Fortran benchmarks:

800.pot3d_s: basepeak = yes

820.cloverleaf_s: -m64 -stand f18 -Wl,-z,muldefs
-Wl,-plugin-opt=-inline-threshold=1500
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-ffp-model=fast -xclearwaterforest(pass 2) -flto
-qopt-mem-layout-trans=4 -O3 -mfpmath=sse -funroll-loops
-nostandard-realloc-lhs -align array32byte -auto
-DSPEC_OPENMP -fiopenmp -L/usr/local/jemalloc-5.3.0/lib
-ljemalloc

822.palm_s: basepeak = yes

849.fotonik3d_s: basepeak = yes

865.roms_s: basepeak = yes

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Peak Optimization Flags (Continued)

Benchmarks using both C and C++:

809.cactus_s: `basepeak = yes`

The flags files that were used to format this result can be browsed at
`http://www.spec.org/cpu2026/results/flags/Intel-ic2026-official-linux64-v1.1.html`
`http://www.spec.org/cpu2026/results/flags/Supermicro-Platform-Settings-V1.2-CWF-revC.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2026/results/flags/Intel-ic2026-official-linux64-v1.1.xml`
`http://www.spec.org/cpu2026/results/flags/Supermicro-Platform-Settings-V1.2-CWF-revC.xml`

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

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