SPEC CPU®2026 Floating Point Speed Result

Hewlett Packard Enterprise

(Test Sponsor: HPE)

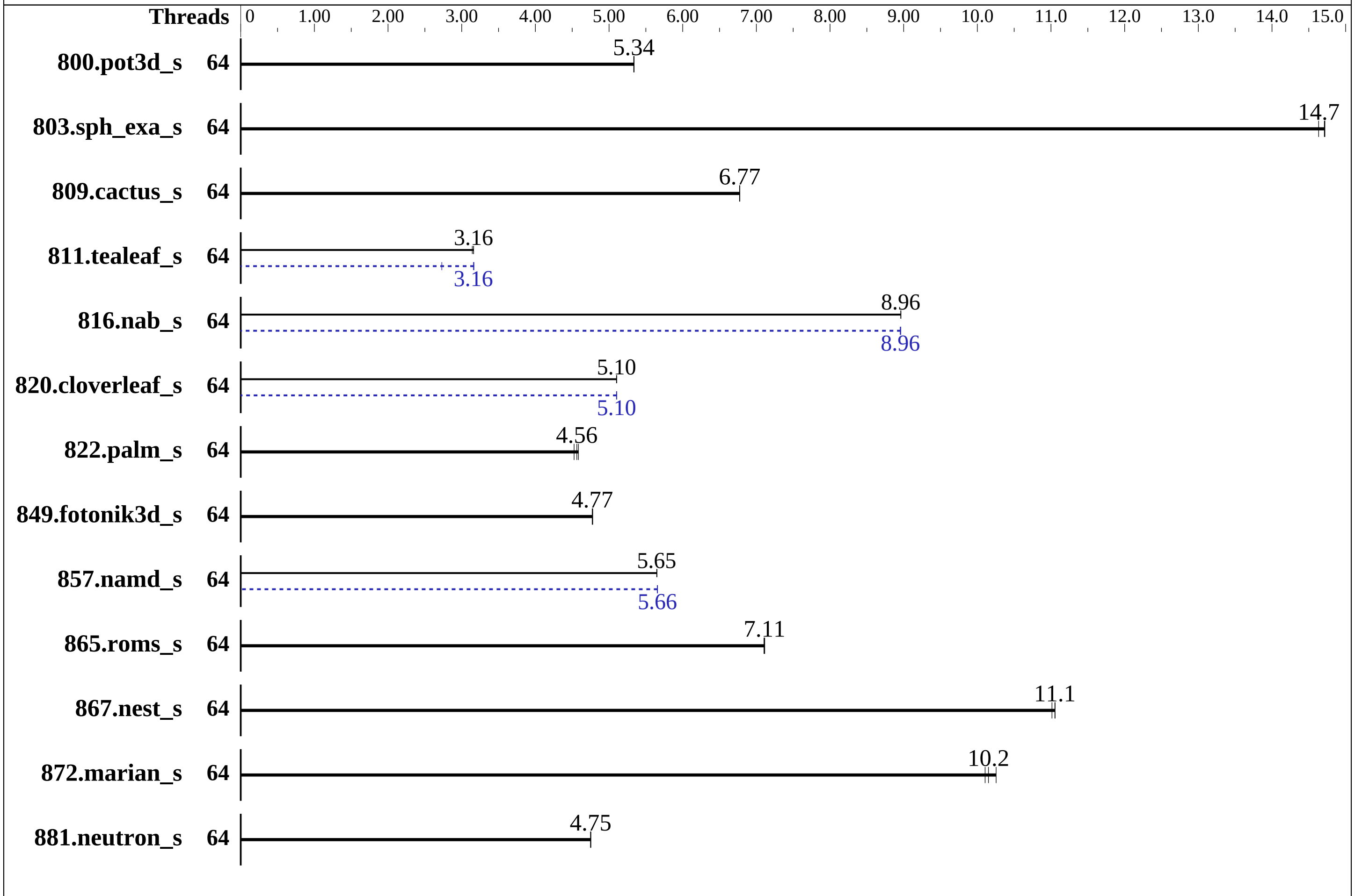
ProLiant Compute EL220 Gen12
(2.30 GHz, Intel Xeon 6530P)

SPECspeed®2026_fp_base = 6.48

SPECspeed®2026_fp_peak = 6.48

CPU2026 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Sep-2026
Hardware Availability: Oct-2026
Software Availability: Apr-2026



Hardware

CPU Name:	Intel Xeon 6530P
Max MHz:	4100
Nominal:	2300
Enabled:	32 cores, 1 chip, 2 threads/core
Orderable:	1 Chip
Cache L1:	64 KB I + 48 KB D on chip per core
L2:	2 MB I+D on chip per core
L3:	144 MB I+D on chip per chip
Other:	None
Memory:	256 GB (8 x 32 GB 2Rx8 PC5-6400B-R)
Storage:	1 x 480 GB NVMe SSD
Cooling:	Air
Other:	None

Software

OS:	SUSE Linux Enterprise Server 15 SP7 Kernel 6.4.0-150700.53.6-default
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:	HPE BIOS Version v1.86 08/04/2026 released Aug-2026
File System:	btrfs
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	jemalloc memory allocator v5.3
Power Management:	BIOS and OS set to prefer performance at the cost of additional power usage

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Test Sponsor:	HPE	**Hardware Availability:**	Oct-2026
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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	64	126	5.34	126	5.34	**126**	**5.34**	64	126	5.34	126	5.34	**126**	**5.34**
803.sph_exa_s	64	84.1	14.7	**84.2**	**14.7**	84.6	14.6	64	84.1	14.7	**84.2**	**14.7**	84.6	14.6
809.cactus_s	64	**166**	**6.77**	166	6.77	166	6.77	64	**166**	**6.77**	166	6.77	166	6.77
811.tealeaf_s	64	177	3.14	176	3.16	**176**	**3.16**	64	176	3.17	204	2.73	**176**	**3.16**
816.nab_s	64	126	8.96	126	8.96	**126**	**8.96**	64	**126**	**8.96**	126	8.96	126	8.95
820.cloverleaf_s	64	168	5.10	168	5.10	**168**	**5.10**	64	**168**	**5.10**	168	5.10	168	5.10
822.palm_s	64	268	4.58	271	4.53	**269**	**4.56**	64	268	4.58	271	4.53	**269**	**4.56**
849.fotonik3d_s	64	138	4.77	138	4.78	**138**	**4.77**	64	138	4.77	138	4.78	**138**	**4.77**
857.namd_s	64	**257**	**5.65**	257	5.65	257	5.65	64	257	5.66	**257**	**5.66**	257	5.65
865.roms_s	64	153	7.11	**153**	**7.11**	153	7.10	64	153	7.11	**153**	**7.11**	153	7.10
867.nest_s	64	196	11.0	**195**	**11.1**	195	11.1	64	196	11.0	**195**	**11.1**	195	11.1
872.marian_s	64	**107**	**10.2**	106	10.3	107	10.1	64	**107**	**10.2**	106	10.3	107	10.1
881.neutron_s	64	171	4.75	**172**	**4.75**	172	4.75	64	171	4.75	**172**	**4.75**	172	4.75

SPECspeed®2026_fp_base = 6.48

SPECspeed®2026_fp_peak = 6.48

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"
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
tuned-adm profile was set to virtual-host using 'tuned-adm profile virtual-host'
```

Environment Variables Notes

```
Environment variables set by runcpu before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
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.

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)

(Continued on next page)

General Notes (Continued)

```
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 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 Configurations : Parameters are selected in the order shown below
Workload Profile set to General Peak Frequency Compute
Thermal Configuration set to Maximum Cooling
Enhanced Processor Performance Profile set to Aggressive
Memory Patrol Scrubbing set to Disabled

 Sysinfo program /home/cpu2026/bin/sysinfo
 Rev: 779ab21020787073335a329f3a45e2cd
 running on localhost Sun Sep 13 16:34:20 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 254 (254.27+suse.167.g130293e510)
 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
```

(Continued on next page)

Platform Notes (Continued)

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

------------------------------------------------------------
1. uname -srvm
  Linux 6.4.0-150700.53.6-default #1 SMP PREEMPT_DYNAMIC Tue Jul  1 14:54:47 UTC 2025 (8ab7501) x86_64

------------------------------------------------------------
2. w
   16:34:20 up  3:48,  4 users,  load average: 31.33, 25.65, 24.82
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT

------------------------------------------------------------
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) 1029837
  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) 1029837
  virtual memory          (kbytes, -v) unlimited
  file locks                      (-x) unlimited

------------------------------------------------------------
5. sysinfo process ancestry
 /usr/lib/systemd/systemd --switched-root --system --deserialize=42
 sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
 sshd: root [priv]
 sshd: root@notty
 bash -c cd $SPEC/ && $SPEC/reportable-ic2026.0-lin-graniterapids-speed-smt-on-20260429.sh
 runcpu --nobuild --reportable --action validate --define default-platform-flags -c
   ic2026.0-graniterapids-cpu2026-1.0.1-speed-20260429.cfg --threads 64 --define cores=32 --tune base,peak
   --n=3 -o all --define smt-on --define drop_caches fpspeed
 runcpu --nobuild --reportable --action validate --define default-platform-flags --configfile
   ic2026.0-graniterapids-cpu2026-1.0.1-speed-20260429.cfg --threads 64 --define cores=32 --tune base,peak
```

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Platform Notes (Continued)

```
    --iterations 3 --output_format all --define smt-on --define drop_caches --nopower --runmode speed --tune
    base:peak --size refspeed fpspeed --nopreenv --note-preenv --logfile
    $SPEC/tmp/CPU2026.002/templogs/preenv.fpspeed.002.0.log --lognum 002.0 --from_runcpu 2
  specperl $SPEC/bin/sysinfo
 $SPEC = /home/cpu2026

 ------------------------------------------------------------
 6. /proc/cpuinfo
     model name      : Intel(R) Xeon(R) 6530P
     vendor_id       : GenuineIntel
     cpu family      : 6
     model           : 173
     stepping        : 1
     microcode       : 0x1000434
     bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
     cpu cores       : 32
     siblings        : 64
     1 physical ids (chips)
     64 processors (hardware threads)
     physical id 0: core ids 0-31
     physical id 0: apicids 0-63
  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:                           46 bits physical, 57 bits virtual
   Byte Order:                              Little Endian
   CPU(s):                                  64
   On-line CPU(s) list:                     0-63
   Vendor ID:                               GenuineIntel
   Model name:                              Intel(R) Xeon(R) 6530P
   CPU family:                              6
   Model:                                   173
   Thread(s) per core:                      2
   Core(s) per socket:                      32
   Socket(s):                               1
   Stepping:                                1
   BogoMIPS:                                4600.00
   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
```

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Platform Notes (Continued)

```
                                        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 hfi 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:                            1.5 MiB (32 instances)
  L1i cache:                            2 MiB (32 instances)
  L2 cache:                             64 MiB (32 instances)
  L3 cache:                             144 MiB (1 instance)
  NUMA node(s):                         1
  NUMA node0 CPU(s):                    0-63
  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
  Vulnerability Spectre v2:             Mitigation; Enhanced / Automatic IBRS; IBPB conditional;
                                        PBRSB-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     1.5M   12 Data            1     64        1             64
     L1i       64K       2M   16 Instruction     1     64        1             64
     L2         2M      64M   16 Unified         2   2048        1             64
     L3       144M     144M   16 Unified         3 147456        1             64
```

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Platform Notes (Continued)

```
------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 1 nodes (0)
  node 0 cpus: 0-63
  node 0 size: 257492 MB
  node 0 free: 180122 MB
  node distances:
  node   0
    0:  10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       263672260 kB

------------------------------------------------------------
10. who -r
  run-level 3 Sep 13 12:46

------------------------------------------------------------
11. Systemd service manager version: systemd 254 (254.27+suse.167.g130293e510)
  Default Target  Status
  multi-user      running

------------------------------------------------------------
12. Services, from systemctl list-unit-files
  STATE            UNIT FILES
  enabled          ModemManager YaST2-Firstboot YaST2-Second-Stage apparmor appstream-sync-cache auditd
                   bluetooth cron display-manager getty@ irqbalance issue-generator kbdsettings klog
                   lvm2-monitor nscd nvmefc-boot-connections nvmf-autoconnect postfix purge-kernels rollback
                   rsyslog smartd sshd systemd-pstore tuned wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6
                   wickedd-nanny wpa_supplicant
  enabled-runtime  systemd-remount-fs
  disabled         NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon autofs
                   autoyast-initscripts blk-availability bluetooth-mesh boot-sysctl ca-certificates
                   chrony-wait chronyd console-getty cups cups-browsed debug-shell dnsmasq ebtables
                   exchange-bmc-os-info firewalld fsidd gnome-remote-desktop gpm grub2-once haveged
                   hwloc-dump-hwdata ipmi ipmievd issue-add-ssh-keys kexec-load lunmask man-db-create
                   multipathd nfs nfs-blkmap nmb openvpn@ ostree-remount ostree-state-overlay@ rpcbind
                   rpmconfigcheck rsyncd rtkit-daemon samba-bgqd serial-getty@ smartd_generate_opts smb snmpd
                   snmptrapd speech-dispatcherd systemd-boot-check-no-failures systemd-confext
                   systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd udisks2
                   update-system-flatpaks upower vncserver@ wpa_supplicant@
  indirect         pcscd saned@ systemd-userdbd wickedd

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

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Platform Notes (Continued)

```
13. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-6.4.0-150700.53.6-default
  root=UUID=277f451d-4a2b-4c92-9b5a-be6c38c3c237
  splash=silent
  mitigations=auto
  quiet
  security=apparmor

------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 22:
    Unable to determine current policy
    boost state support:
      Supported: yes
      Active: yes

------------------------------------------------------------
15. tuned-adm active
  Current active profile: virtual-host

------------------------------------------------------------
16. sysctl
  kernel.numa_balancing               0
  kernel.randomize_va_space           2
  vm.compaction_proactiveness        20
  vm.dirty_background_bytes           0
  vm.dirty_background_ratio           5
  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
```

(Continued on next page)

Platform Notes (Continued)

```
  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: /home/cpu2026
  Filesystem     Type   Size  Used Avail Use% Mounted on
  /dev/nvme0n1p2 btrfs  447G  329G  117G  74% /home

------------------------------------------------------------
21. /sys/devices/virtual/dmi/id
    Vendor:         HPE
    Product:        HPE ProLiant Compute EL220 Gen12
    Product Family: ProLiant
    Serial:         PZLKVX2LMMF00I

------------------------------------------------------------
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:
    8x Hynix HMCG88AHBRA471N 32 GB 2 rank 6400


------------------------------------------------------------
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor:       HPE
   BIOS Version:      1.86
   BIOS Date:         08/04/2026
   BIOS Revision:     1.86
```

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Platform Notes (Continued)

```
  Firmware Revision: 1.25
```

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
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

(Continued on next page)

Base Compiler Invocation (Continued)

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
-xgraniterapids -mprefer-vector-width=512 -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
```

C++ benchmarks:
```
-m64 -std=c++17 -Wl,-z,muldefs -Wl,-plugin-opt=-inline-threshold=1500
-xgraniterapids -mprefer-vector-width=512 -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
-xgraniterapids -mprefer-vector-width=512 -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 -xgraniterapids
-mprefer-vector-width=512 -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`

(Continued on next page)

Peak Compiler Invocation (Continued)

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) -xHost(pass 1)
-ffp-model=fast -xgraniterapids(pass 2) -flto
-mprefer-vector-width=512 -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) -xHost(pass 1)
-ffp-model=fast -xgraniterapids(pass 2) -flto
-mprefer-vector-width=512 -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

(Continued on next page)

Peak Optimization Flags (Continued)

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) `-xHost`(pass 1)
`-ffp-model=fast -xgraniterapids`(pass 2) `-flto`
`-mprefer-vector-width=512 -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`

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/HPE-Platform-Flags-Intel-GNR-rev1.5.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/HPE-Platform-Flags-Intel-GNR-rev1.5.xml

Tested with SPEC CPU®2026 v1.0.1 on 2026-09-13 07:04:20-0400.
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