SPEC CPU®2026 Integer Rate Result

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Hewlett Packard Enterprise

(Test Sponsor: HPE)

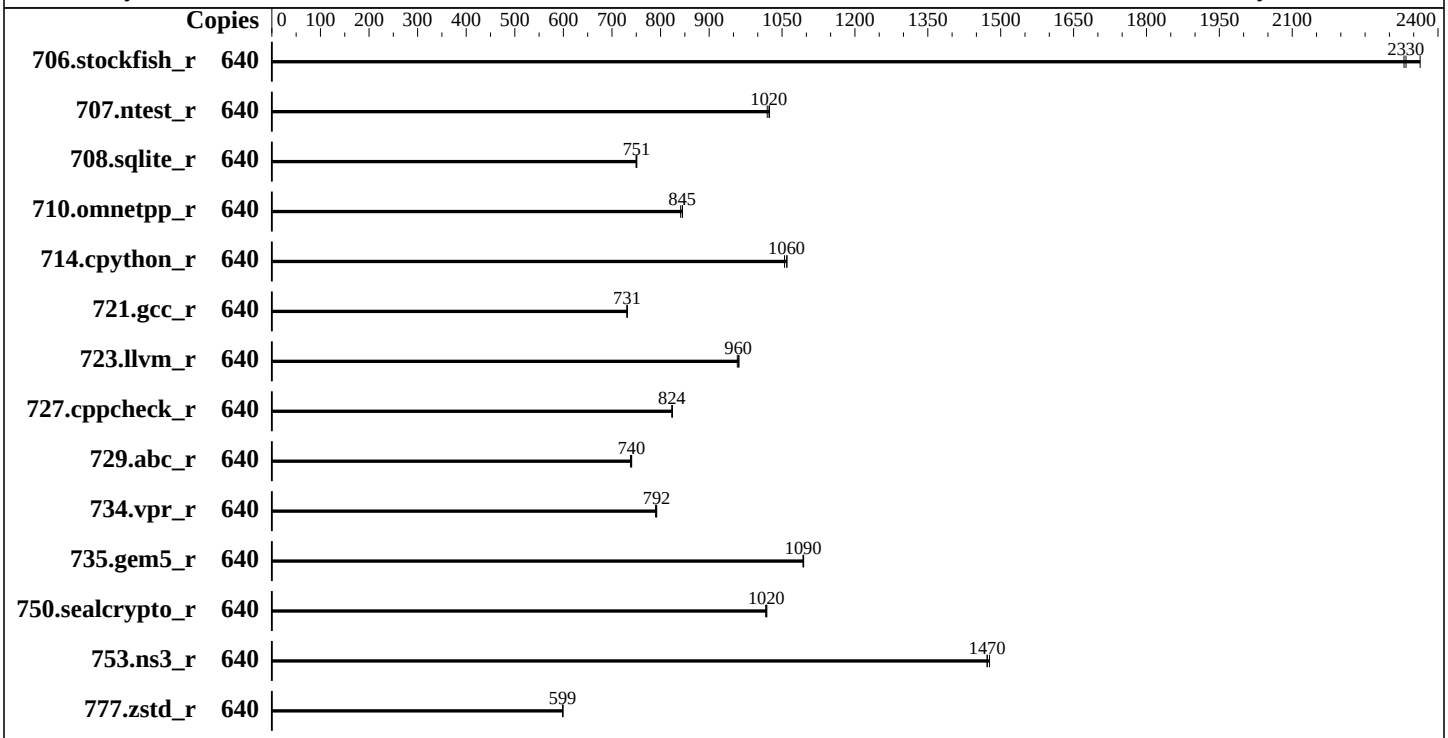
ProLiant DL385 Gen11
(2.10 GHz, AMD EPYC 9845)

SPECrate®2026_int_base = 956

SPECrate®2026_int_peak = 956

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

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



Hardware

CPU Name:	AMD EPYC 9845
Max MHz:	3700
Nominal:	2100
Enabled:	320 cores, 2 chips, 2 threads/core
Orderable:	1,2 chips
Cache L1:	32 KB I + 48 KB D on chip per core
L2:	1 MB I+D on chip per core
L3:	320 MB I+D on chip per chip, 32 MB shared / 16 cores
Other:	None
Memory:	1536 GB (24 x 64 GB 2Rx4 PC5-6400B-R)
Storage:	1 x 480 GB NVMe SSD
Cooling:	DLC
Other:	None

Software

OS:	Ubuntu 24.04.3 LTS Kernel 6.8.0-90-generic
Compiler:	C/C++/Fortran: Version 5.1.0 of AOCC
Compiler Category:	Vendor
Firmware:	HPE BIOS Version v2.90 released Jan-2026
File System:	ext4
System State:	Run level 5 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	None
Power Management:	BIOS and OS is set to prefer performance at the cost of additional power usage

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
706.stockfish_r	640	**345**	**2330**	341	2360	346	2330	640	**345**	**2330**	341	2360	346	2330
707.ntest_r	640	372	1020	**370**	**1020**	370	1020	640	372	1020	**370**	**1020**	370	1020
708.sqlite_r	640	450	751	**450**	**751**	451	750	640	450	751	**450**	**751**	451	750
710.omnetpp_r	640	370	841	368	845	**368**	**845**	640	370	841	368	845	**368**	**845**
714.cpython_r	640	289	1060	291	1060	**289**	**1060**	640	289	1060	291	1060	**289**	**1060**
721.gcc_r	640	601	731	**601**	**731**	600	732	640	601	731	**601**	**731**	600	732
723.llvm_r	640	337	961	339	958	**338**	**960**	640	337	961	339	958	**338**	**960**
727.cppcheck_r	640	279	824	279	824	**279**	**824**	640	279	824	279	824	**279**	**824**
729.abc_r	640	398	738	397	740	**397**	**740**	640	398	738	397	740	**397**	**740**
734.vpr_r	640	**373**	**792**	374	790	373	792	640	**373**	**792**	374	790	373	792
735.gem5_r	640	285	1090	**285**	**1090**	285	1090	640	285	1090	**285**	**1090**	285	1090
750.sealcrypto_r	640	338	1020	**337**	**1020**	337	1020	640	338	1020	**337**	**1020**	337	1020
753.ns3_r	640	**266**	**1470**	267	1470	266	1480	640	**266**	**1470**	267	1470	266	1480
777.zstd_r	640	**689**	**599**	688	599	689	598	640	**689**	**599**	688	599	689	598

SPECrate®2026_int_base = 956

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

Compiler Notes

```
The AMD64 AOCC Compiler Suite is available at
http://developer.amd.com/amd-aocc/
```

Submit Notes

```
The config file option 'submit' was used.
'numactl' was used to bind copies to the cores.
See the configuration file for details.
```

Operating System Notes

```
'ulimit -s unlimited' was used to set environment stack size limit
'ulimit -l 2097152' was used to set environment locked pages in memory limit

runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>

To limit dirty cache to 8% of memory, 'sysctl -w vm.dirty_ratio=8' run as root.
To limit swap usage to minimum necessary, 'sysctl -w vm.swappiness=1' run as root.
```

(Continued on next page)

Operating System Notes (Continued)

```
To free node-local memory and avoid remote memory usage,
'sysctl -w vm.zone_reclaim_mode=1' run as root.
To clear filesystem caches, 'sync; sysctl -w vm.drop_caches=3' run as root.
To disable address space layout randomization (ASLR) to reduce run-to-run
variability, 'sysctl -w kernel.randomize_va_space=0' run as root.
To enable Transparent Hugepages (THP) for all allocations,
'echo always > /sys/kernel/mm/transparent_hugepage/enabled' and
'echo always > /sys/kernel/mm/transparent_hugepage/defrag' run as root.
```

Environment Variables Notes

```
Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH =
     "/home/cpu2026/amd_rate_aocc510_znver5_A_lib/lib:/home/cpu2026/amd_rate_
     aocc510_znver5_A_lib/lib32:"
MALLOC_CONF = "retain:true"
```

General Notes

```
Binaries were compiled on a system with 2x AMD EPYC Venice256 CPU + 2TiB
Memory using Ubuntu 24.04
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.
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.
```

Platform Notes

```
BIOS Configurations : Parameters are selected in the order shown below
Workload Profile set to General Throughput Compute
Determinism Control set to Manual
 Performance Determinism set to Power Deterministic
Memory Patrol Scrubbing set to Disabled
ACPI CST C2 Latency set to 18 microseconds
NUMA memory domains per socket set to Two memory domains per socket
Thermal Configuration set to Maximum Cooling
AMD Periodic Directory Rinse set to Periodic
Workload Profile set to Custom
 Power Regulator set to OS Control Mode

 Sysinfo program /home/cpu2026/bin/sysinfo
```

(Continued on next page)

Platform Notes (Continued)

```
Rev: 069f95da7e7f5d81b2ce48a82150e54f
running on admin1 Fri Jan 30 01:51:21 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 255 (255.4-1ubuntu8.12)
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
------------------------------------------------------------

------------------------------------------------------------
1. uname -srvm
  Linux 6.8.0-90-generic #91-Ubuntu SMP PREEMPT_DYNAMIC Tue Nov 18 14:14:30 UTC 2025 x86_64

------------------------------------------------------------
2. w
   01:51:21 up  2:09,  6 users,  load average: 0.34, 0.08, 0.03
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU  WHAT
  admin1            10.30.195.96     01:51    2:09m  0.00s  0.01s sshd: admin1 [priv]
  admin1            10.30.195.96     01:50    2:09m  0.00s   ?    sshd: admin1 [priv]
  admin1            10.30.195.96     01:50    2:09m  0.00s   ?    sshd: admin1 [priv]
  admin1            10.30.195.96     01:50    2:09m  0.00s  0.01s sshd: admin1 [priv]
  admin1            10.30.195.94     01:35    2:09m  0.00s  0.02s sshd: admin1 [priv]
  admin1            10.30.195.94     23:42    2:09m  0.00s  0.02s sshd: admin1 [priv]
```

(Continued on next page)

Platform Notes (Continued)

```
------------------------------------------------------------
3. Username
  From environment variable $USER:  root
  From the command 'logname':       admin1

------------------------------------------------------------
4. ulimit -a
  time(seconds)        unlimited
  file(blocks)         unlimited
  data(kbytes)         unlimited
  stack(kbytes)        unlimited
  coredump(blocks)     0
  memory(kbytes)       unlimited
  locked memory(kbytes) 2097152
  process              6189316
  nofiles              1024
  vmemory(kbytes)      unlimited
  locks                unlimited
  rtprio               0

------------------------------------------------------------
5. sysinfo process ancestry
 /sbin/init
 sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
 sshd: admin1 [priv]
 sshd: admin1@notty
 sudo $SPEC/intrate.sh
 /bin/bash $SPEC/intrate.sh
 sudo ./run_amd_rate_aocc510_znver5_A1.py
 python3 ./run_amd_rate_aocc510_znver5_A1.py
 /bin/bash ./amd_rate_aocc510_znver5_A1.sh
 runcpu --config amd_rate_aocc510_znver5_A1.cfg --tune base --reportable --iterations 3 intrate
 runcpu --configfile amd_rate_aocc510_znver5_A1.cfg --tune base --reportable --iterations 3 --nopower
   --runmode rate --tune base --size test:train:refrate intrate --nopreenv --note-preenv --logfile
   $SPEC/tmp/CPU2026.001/templogs/preenv.intrate.001.0.log --lognum 001.0 --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2026

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : AMD EPYC 9845 160-Core Processor
    vendor_id       : AuthenticAMD
    cpu family      : 26
    model           : 17
    stepping        : 0
    microcode       : 0xb101054
```

(Continued on next page)

Platform Notes (Continued)

```
     bugs            : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
     TLB size        : 192 4K pages
     cpu cores       : 160
     siblings        : 320
     2 physical ids (chips)
     640 processors (hardware threads)
     physical id 0: core ids 0-159
     physical id 1: core ids 0-159
     physical id 0: apicids 0-319
     physical id 1: apicids 512-831
   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 2.39.3:
   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):                               640
   On-line CPU(s) list:                  0-639
   Vendor ID:                            AuthenticAMD
   BIOS Vendor ID:                       Advanced Micro Devices, Inc.
   Model name:                           AMD EPYC 9845 160-Core Processor
   BIOS Model name:                    AMD EPYC 9845 160-Core Processor                CPU @ 2.1GHz
   BIOS CPU family:                      107
   CPU family:                           26
   Model:                                17
   Thread(s) per core:                   2
   Core(s) per socket:                   160
   Socket(s):                            2
   Stepping:                             0
   Frequency boost:                      enabled
   CPU(s) scaling MHz:                   101%
   CPU max MHz:                          2100.0000
   CPU min MHz:                          1500.0000
   BogoMIPS:                             4193.60
   Flags:                                fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
                                       pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr_opt pdpe1gb
                                        rdtscp lm constant_tsc rep_good amd_lbr_v2 nopl nonstop_tsc cpuid
                                       extd_apicid aperfmperf rapl pni pclmulqdq monitor ssse3 fma cx16 pcid
                                        sse4_1 sse4_2 x2apic movbe popcnt aes xsave avx f16c rdrand lahf_lm
                                       cmp_legacy svm extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch
                                          osvw ibs skinit wdt tce topoext perfctr_core perfctr_nb bpext
                                        perfctr_llc mwaitx cpb cat_l3 cdp_l3 hw_pstate ssbd mba perfmon_v2
```

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Platform Notes (Continued)

```
                                ibrs ibpb stibp ibrs_enhanced vmmcall fsgsbase tsc_adjust bmi1 avx2
                                 smep bmi2 erms invpcid cqm rdt_a avx512f avx512dq rdseed adx smap
                               avx512ifma clflushopt clwb avx512cd sha_ni avx512bw avx512vl xsaveopt
                                    xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
                                   cqm_mbm_local user_shstk avx_vnni avx512_bf16 clzero irperf
                                xsaveerptr rdpru wbnoinvd amd_ppin cppc amd_ibpb_ret arat npt lbrv
                                 svm_lock nrip_save tsc_scale vmcb_clean flushbyasid decodeassists
                                pausefilter pfthreshold avic v_vmsave_vmload vgif x2avic v_spec_ctrl
                                 vnmi avx512vbmi umip pku ospke avx512_vbmi2 gfni vaes vpclmulqdq
                               avx512_vnni avx512_bitalg avx512_vpopcntdq la57 rdpid bus_lock_detect
                               movdiri movdir64b overflow_recov succor smca fsrm avx512_vp2intersect
                                         flush_l1d debug_swap
  Virtualization:                        AMD-V
  L1d cache:                             15 MiB (320 instances)
  L1i cache:                             10 MiB (320 instances)
  L2 cache:                              320 MiB (320 instances)
  L3 cache:                              640 MiB (20 instances)
  NUMA node(s):                          4
  NUMA node0 CPU(s):                     0-79,320-399
  NUMA node1 CPU(s):                     80-159,400-479
  NUMA node2 CPU(s):                     160-239,480-559
  NUMA node3 CPU(s):                     240-319,560-639
  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; STIBP
                                         always-on; RSB filling; PBRSB-eIBRS Not affected; BHI Not affected
  Vulnerability Srbds:                   Not affected
  Vulnerability Tsx async abort:         Not affected
  Vulnerability Vmscape:                 Not affected

From lscpu --cache:
     NAME ONE-SIZE ALL-SIZE WAYS TYPE        LEVEL  SETS PHY-LINE COHERENCY-SIZE
     L1d       48K      15M   12 Data            1    64        1             64
     L1i       32K      10M    8 Instruction     1    64        1             64
     L2         1M     320M   16 Unified         2  1024        1             64
     L3        32M     640M   16 Unified         3 32768        1             64

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

(Continued on next page)

Platform Notes (Continued)

```
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 4 nodes (0-3)
  node 0 cpus: 0-79,320-399
  node 0 size: 386510 MB
  node 0 free: 384125 MB
  node 1 cpus: 80-159,400-479
  node 1 size: 386974 MB
  node 1 free: 385800 MB
  node 2 cpus: 160-239,480-559
  node 2 size: 387017 MB
  node 2 free: 385878 MB
  node 3 cpus: 240-319,560-639
  node 3 size: 386906 MB
  node 3 free: 385665 MB
  node distances:
  node   0   1   2   3
    0:  10  12  32  32
    1:  12  10  32  32
    2:  32  32  10  12
    3:  32  32  12  10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       1584546928 kB

------------------------------------------------------------
10. who -r
  run-level 5 Jan 29 23:42

------------------------------------------------------------
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.12)
  Default Target  Status
  graphical       running

------------------------------------------------------------
12. Services, from systemctl list-unit-files
  STATE            UNIT FILES
  enabled          ModemManager apparmor apport blk-availability cloud-config cloud-final cloud-init
                   cloud-init-local console-setup cron dmesg e2scrub_reap finalrd getty@ gpu-manager
                     grub-common grub-initrd-fallback keyboard-setup lvm2-monitor multipathd
                   networkd-dispatcher open-iscsi open-vm-tools pollinate rsyslog secureboot-db setvtrgb
                     snapd sysstat systemd-networkd systemd-networkd-wait-online systemd-pstore
                     systemd-resolved thermald tuned ua-reboot-cmds ubuntu-advantage udisks2 ufw
                     unattended-upgrades vgauth
  enabled-runtime  netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs
  disabled         console-getty debug-shell iscsid nftables rsync serial-getty@ ssh
```

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Platform Notes (Continued)

```
                systemd-boot-check-no-failures systemd-confext systemd-network-generator
              systemd-networkd-wait-online@ systemd-pcrlock-file-system systemd-pcrlock-firmware-code
              systemd-pcrlock-firmware-config systemd-pcrlock-machine-id systemd-pcrlock-make-policy
              systemd-pcrlock-secureboot-authority systemd-pcrlock-secureboot-policy systemd-sysext
                  systemd-time-wait-sync systemd-timesyncd upower
  indirect        systemd-sysupdate systemd-sysupdate-reboot uuidd
  masked        cryptdisks cryptdisks-early hwclock multipath-tools-boot screen-cleanup sudo x11-common

------------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-6.8.0-90-generic
  root=UUID=60685607-d408-4b5d-9478-a6a431e11442
  ro

------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 37:
    current policy: frequency should be within 1.50 GHz and 2.10 GHz.
                    The governor "performance" may decide which speed to use
                    within this range.
    boost state support:
      Supported: yes
      Active: yes
      Boost States: 0
      Total States: 3
      Pstate-P0:  2100MHz

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

------------------------------------------------------------
16. sysctl
  kernel.numa_balancing               1
  kernel.randomize_va_space           0
  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                      8
  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
```

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Platform Notes (Continued)

```
  vm.nr_overcommit_hugepages          0
  vm.swappiness                       1
  vm.watermark_boost_factor       15000
  vm.watermark_scale_factor          10
  vm.zone_reclaim_mode                1

------------------------------------------------------------
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 Ubuntu 24.04.3 LTS

------------------------------------------------------------
20. Disk information
SPEC is set to: /home/cpu2026
  Filesystem     Type  Size  Used Avail Use% Mounted on
  /dev/sda2      ext4  439G   51G  366G  13% /

------------------------------------------------------------
21. /sys/devices/virtual/dmi/id
    Vendor:         HPE
    Product:        ProLiant DL385 Gen11
    Product Family: ProLiant
    Serial:         DL385G11-003

------------------------------------------------------------
22. dmidecode
  Additional information from dmidecode 3.5 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.
```

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Platform Notes (Continued)

```
  Memory:
    5x Micron MTC40F2046S1RC64BD2 MWFF 64 GB 2 rank 6400
    19x Micron MTC40F2046S1RC64BD2 QSFF 64 GB 2 rank 6400


 ------------------------------------------------------------
 23. BIOS
 (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:       HPE
    BIOS Version:      2.90
    BIOS Date:         01/09/2026
    BIOS Revision:     2.90
    Firmware Revision: 1.63
```

Compiler Version Notes

```
==============================================================================
C      | 708.sqlite_r(base) 714.cpython_r(base) 777.zstd_r(base)
------------------------------------------------------------------------------
AMD clang version 17.0.6 (CLANG: AOCC_5.1.0-Build#1994 2025_12_23)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.1.0/bin
------------------------------------------------------------------------------

==============================================================================
C++    | 706.stockfish_r(base) 707.ntest_r(base) 727.cppcheck_r(base)
       | 753.ns3_r(base)
------------------------------------------------------------------------------
AMD clang version 17.0.6 (CLANG: AOCC_5.1.0-Build#1994 2025_12_23)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.1.0/bin
------------------------------------------------------------------------------

==============================================================================
C++, C | 710.omnetpp_r(base) 721.gcc_r(base) 723.llvm_r(base) 729.abc_r(base)
       | 734.vpr_r(base) 735.gem5_r(base) 750.sealcrypto_r(base)
------------------------------------------------------------------------------
AMD clang version 17.0.6 (CLANG: AOCC_5.1.0-Build#1994 2025_12_23)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-5.1.0/bin
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
clang

C++ benchmarks:
clang++

Benchmarks using both C and C++:
clang++ clang

Base Portability Flags

706.stockfish_r: -DSPEC_LP64
707.ntest_r: -DSPEC_LP64
708.sqlite_r: -DSPEC_LP64
710.omnetpp_r: -DSPEC_LP64
714.cpython_r: -DSPEC_LP64
721.gcc_r: -DSPEC_LP64
723.llvm_r: -DSPEC_LP64
727.cppcheck_r: -DSPEC_LP64
729.abc_r: -DSPEC_LP64
734.vpr_r: -DSPEC_LP64
735.gem5_r: -DSPEC_LP64
750.sealcrypto_r: -DSPEC_LP64
753.ns3_r: -DSPEC_LP64
777.zstd_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-m64 -std=c18 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-ldist-scalar-expand -fenable-aggressive-gather
-Wl,-mllvm -Wl,-extra-inliner -O3 -march=znver5 -fveclib=AMDLIBM
-fno-PIE -no-pie -flto -fstruct-layout=7 -mllvm -unroll-threshold=50
-mllvm -inline-threshold=1000 -fremap-arrays -fstrip-mining
-mllvm -reduce-array-computations=3 -zopt -lamdlibm -lflang
-lamdalloc

C++ benchmarks:
-m64 -std=c++17 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver5
-fveclib=AMDLIBM -flto -mllvm -unroll-threshold=100

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Base Optimization Flags (Continued)

C++ benchmarks (continued):
-mllvm -loop-unswitch-threshold=200000
-mllvm -reduce-array-computations=3 -zopt -fno-PIE -no-pie
-fvirtual-function-elimination -fvisibility=hidden -lamdlibm -lflang
-lamdalloc

Benchmarks using both C and C++:
-m64 -std=c++17 -std=c18 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver5
-fveclib=AMDLIBM -fno-PIE -no-pie -flto -fstruct-layout=7
-mllvm -unroll-threshold=50 -mllvm -inline-threshold=1000
-fremap-arrays -fstrip-mining -mllvm -reduce-array-computations=3
-zopt -mllvm -unroll-threshold=100
-mllvm -loop-unswitch-threshold=200000 -fvirtual-function-elimination
-fvisibility=hidden -lamdlibm -lflang -lamdalloc

Peak Optimization Flags

C benchmarks:

708.sqlite_r: basepeak = yes

714.cpython_r: basepeak = yes

777.zstd_r: basepeak = yes

C++ benchmarks:

706.stockfish_r: basepeak = yes

707.ntest_r: basepeak = yes

727.cppcheck_r: basepeak = yes

753.ns3_r: basepeak = yes

Benchmarks using both C and C++:

710.omnetpp_r: basepeak = yes

721.gcc_r: basepeak = yes

723.llvm_r: basepeak = yes

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Peak Optimization Flags (Continued)

729.abc_r: `basepeak = yes`

734.vpr_r: `basepeak = yes`

735.gem5_r: `basepeak = yes`

750.sealcrypto_r: `basepeak = yes`

The flags files that were used to format this result can be browsed at
`http://www.spec.org/cpu2026/results/flags/HPE-Platform-Flags-AMD-Turin-rev1.11.html`
`http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-05-04.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2026/results/flags/HPE-Platform-Flags-AMD-Turin-rev1.11.xml`
`http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-05-04.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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