SPEC CPU®2026 Integer Speed Result

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Hewlett Packard Enterprise

(Test Sponsor: HPE)

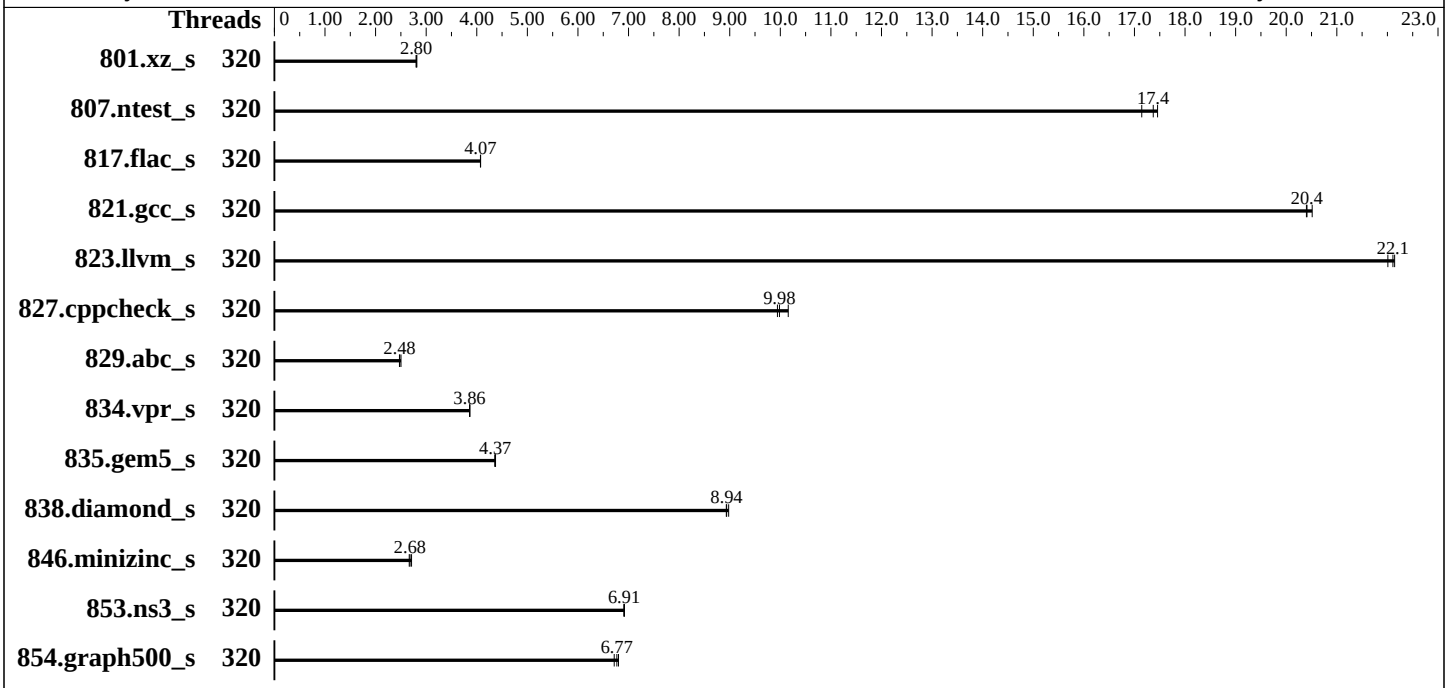
ProLiant DL325 Gen11
(2.10 GHz, AMD EPYC 9845)

SPECspeed®2026_int_base = 6.56

SPECspeed®2026_int_peak = 6.56

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

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



Hardware

CPU Name:	AMD EPYC 9845
Max MHz:	3700
Nominal:	2100
Enabled:	160 cores, 1 chip, 2 threads/core
Orderable:	1 Chip
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:	768 GB (12 x 64 GB 2Rx4 PC5-6400B-R)
Storage:	1 x 480 GB NVMe SSD
Cooling:	CLC
Other:	None

Software

OS:	Ubuntu 24.04.3 LTS Kernel 6.8.0-94-generic
Compiler:	C/C++: Version 5.1.0 of AOCC Fortran: Flang v22
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						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
801.xz_s	320	210	2.82	**211**	**2.80**	211	2.80	320	210	2.82	**211**	**2.80**	211	2.80
807.ntest_s	320	65.3	17.5	**65.6**	**17.4**	66.5	17.1	320	65.3	17.5	**65.6**	**17.4**	66.5	17.1
817.flac_s	320	**426**	**4.07**	427	4.07	426	4.08	320	**426**	**4.07**	427	4.07	426	4.08
821.gcc_s	320	101	20.5	101	20.4	**101**	**20.4**	320	101	20.5	101	20.4	**101**	**20.4**
823.llvm_s	320	**63.8**	**22.1**	63.7	22.1	64.1	22.0	320	**63.8**	**22.1**	63.7	22.1	64.1	22.0
827.cppcheck_s	320	**112**	**9.98**	110	10.2	113	9.94	320	**112**	**9.98**	110	10.2	113	9.94
829.abc_s	320	336	2.47	**335**	**2.48**	332	2.50	320	336	2.47	**335**	**2.48**	332	2.50
834.vpr_s	320	247	3.86	247	3.86	**247**	**3.86**	320	247	3.86	247	3.86	**247**	**3.86**
835.gem5_s	320	**261**	**4.37**	261	4.36	261	4.37	320	**261**	**4.37**	261	4.36	261	4.37
838.diamond_s	320	**112**	**8.94**	111	8.98	112	8.93	320	**112**	**8.94**	111	8.98	112	8.93
846.minizinc_s	320	**250**	**2.68**	247	2.71	251	2.67	320	**250**	**2.68**	247	2.71	251	2.67
853.ns3_s	320	**167**	**6.91**	167	6.92	167	6.91	320	**167**	**6.91**	167	6.92	167	6.91
854.graph500_s	320	**90.3**	**6.77**	89.8	6.80	91.0	6.72	320	**90.3**	**6.77**	89.8	6.80	91.0	6.72

SPECspeed®2026_int_base = 6.56

SPECspeed®2026_int_peak = 6.56

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/
Flang v22 is available at
https://flang.llvm.org/
```

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.
To free node-local memory and avoid remote memory usage,
```

(Continued on next page)

Operating System Notes (Continued)

```
'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:
GOMP_CPU_AFFINITY = "0-319"
LD_LIBRARY_PATH =
     "/home/cpu2026/amd_speed_aocc510_flang22_znver5_A_lib/lib:/home/cpu2026/
     amd_speed_aocc510_flang22_znver5_A_lib/lib32:"
MALLOC_CONF = "retain:true"
```

General Notes

```
Binaries were compiled on a system with an AMD EPYC 9754 CPU + 768 GiB
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 Peak Frequency Compute
Determinism Control set to Manual
Performance Determinism set to Power Deterministic
Memory Patrol Scrubbing set to Disabled
Last-Level Cache (LLC) as NUMA Node set to Enabled
ACPI CST C2 Latency set to 18 microseconds
Thermal Configuration set to Maximum Cooling
NUMA memory domains per socket set to Two memory domains per socket
 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 Tue Nov 25 18:19:30 2025

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 6.8.0-94-generic #96-Ubuntu SMP PREEMPT_DYNAMIC Fri Jan  9 20:36:55 UTC 2026 x86_64

------------------------------------------------------------
2. w
   18:19:30 up 3 min,  1 user,  load average: 0.00, 0.00, 0.00
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU  WHAT
  admin1            172.16.0.100     18:17    2:59   0.00s  0.02s sshd: admin1 [priv]

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

(Continued on next page)

Platform Notes (Continued)

```
------------------------------------------------------------
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              3093820
  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@pts/0
 -bash
 sudo ./run_intspeed.py
 sudo ./run_intspeed.py
 python3 ./run_intspeed.py
 /bin/bash ./amd_speed_aocc510_flang22_znver5_A1.sh
 runcpu --config amd_speed_aocc510_flang22_znver5_A1.cfg --tune base --reportable --iterations 3 intspeed
 runcpu --configfile amd_speed_aocc510_flang22_znver5_A1.cfg --tune base --reportable --iterations 3
   --nopower --runmode speed --tune base --size test:train:refspeed intspeed --nopreenv --note-preenv
   --logfile $SPEC/tmp/CPU2026.001/templogs/preenv.intspeed.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
    bugs            : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
    TLB size        : 192 4K pages
    cpu cores       : 160
    siblings        : 320
    1 physical ids (chips)
```

(Continued on next page)

Platform Notes (Continued)

```
     320 processors (hardware threads)
     physical id 0: core ids 0-159
     physical id 0: apicids 0-319
  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):                               320
   On-line CPU(s) list:                  0-319
   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):                            1
   Stepping:                             0
   Frequency boost:                      enabled
   CPU(s) scaling MHz:                   102%
   CPU max MHz:                          2100.0000
   CPU min MHz:                          1500.0000
   BogoMIPS:                             4193.72
   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
                                 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
```

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Platform Notes (Continued)

```
                                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:                              7.5 MiB (160 instances)
  L1i cache:                              5 MiB (160 instances)
  L2 cache:                               160 MiB (160 instances)
  L3 cache:                               320 MiB (10 instances)
  NUMA node(s):                           10
  NUMA node0 CPU(s):                      0-15,160-175
  NUMA node1 CPU(s):                      16-31,176-191
  NUMA node2 CPU(s):                      32-47,192-207
  NUMA node3 CPU(s):                      48-63,208-223
  NUMA node4 CPU(s):                      64-79,224-239
  NUMA node5 CPU(s):                      80-95,240-255
  NUMA node6 CPU(s):                      96-111,256-271
  NUMA node7 CPU(s):                      112-127,272-287
  NUMA node8 CPU(s):                      128-143,288-303
  NUMA node9 CPU(s):                      144-159,304-319
  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     7.5M   12 Data            1    64        1             64
     L1i       32K       5M    8 Instruction     1    64        1             64
     L2         1M     160M   16 Unified         2  1024        1             64
     L3        32M     320M   16 Unified         3 32768        1             64

------------------------------------------------------------
8. numactl --hardware
```

(Continued on next page)

Platform Notes (Continued)

```
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 10 nodes (0-9)
  node 0 cpus: 0-15,160-175
  node 0 size: 77024 MB
  node 0 free: 76343 MB
  node 1 cpus: 16-31,176-191
  node 1 size: 77403 MB
  node 1 free: 77112 MB
  node 2 cpus: 32-47,192-207
  node 2 size: 77357 MB
  node 2 free: 77137 MB
  node 3 cpus: 48-63,208-223
  node 3 size: 77405 MB
  node 3 free: 77065 MB
  node 4 cpus: 64-79,224-239
  node 4 size: 77405 MB
  node 4 free: 77156 MB
  node 5 cpus: 80-95,240-255
  node 5 size: 77405 MB
  node 5 free: 77150 MB
  node 6 cpus: 96-111,256-271
  node 6 size: 77405 MB
  node 6 free: 77156 MB
  node 7 cpus: 112-127,272-287
  node 7 size: 77403 MB
  node 7 free: 76560 MB
  node 8 cpus: 128-143,288-303
  node 8 size: 77403 MB
  node 8 free: 77159 MB
  node 9 cpus: 144-159,304-319
  node 9 size: 77324 MB
  node 9 free: 76791 MB
  node distances:
  node   0   1   2   3   4   5   6   7   8   9
    0:  10  11  11  11  11  12  12  12  12  12
    1:  11  10  11  11  11  12  12  12  12  12
    2:  11  11  10  11  11  12  12  12  12  12
    3:  11  11  11  10  11  12  12  12  12  12
    4:  11  11  11  11  10  12  12  12  12  12
    5:  12  12  12  12  12  10  11  11  11  11
    6:  12  12  12  12  12  11  10  11  11  11
    7:  12  12  12  12  12  11  11  10  11  11
    8:  12  12  12  12  12  11  11  11  10  11
    9:  12  12  12  12  12  11  11  11  11  10

------------------------------------------------------------
9. /proc/meminfo
```

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Platform Notes (Continued)

```
    MemTotal:       792099900 kB

------------------------------------------------------------
10. who -r
  run-level 5 Nov 25 18:16

------------------------------------------------------------
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
                    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-6.8.0-94-generic
  root=UUID=c8895b10-3344-47fb-81a4-2b6fb85bbd20
  ro

------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 313:
    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
```

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Platform Notes (Continued)

```
      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
  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

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

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Platform Notes (Continued)

```
 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/nvme0n1p2 ext4  438G   93G  323G  23% /

 ------------------------------------------------------------
 21. /sys/devices/virtual/dmi/id
     Vendor:          HPE
     Product:         ProLiant DL325 Gen11
     Product Family: ProLiant
     Serial:          DL325G11-008

 ------------------------------------------------------------
 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.
    Memory:
      1x Micron MTC40F2046S1RC64BD2 MWFF 64 GB 2 rank 6400
      11x 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: 1.70
```

Compiler Version Notes

```
==============================================================================
C      | 854.graph500_s(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
```

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Compiler Version Notes (Continued)

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

==============================================================================
C++    | 807.ntest_s(base) 827.cppcheck_s(base) 853.ns3_s(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 | 801.xz_s(base) 817.flac_s(base) 821.gcc_s(base) 823.llvm_s(base)
       | 829.abc_s(base) 834.vpr_s(base) 835.gem5_s(base) 838.diamond_s(base)
       | 846.minizinc_s(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

801.xz_s: -DSPEC_LP64
807.ntest_s: -DSPEC_LP64
817.flac_s: -DSPEC_LP64
821.gcc_s: -DSPEC_LP64
823.llvm_s: -DSPEC_LP64
827.cppcheck_s: -DSPEC_LP64
829.abc_s: -DSPEC_LP64
834.vpr_s: -fno-finite-math-only -DSPEC_LP64

(Continued on next page)

Base Portability Flags (Continued)

835.gem5_s: `-fno-finite-math-only -DSPEC_LP64`
838.diamond_s: `-DSPEC_LP64`
846.minizinc_s: `-DSPEC_LP64`
853.ns3_s: `-fno-finite-math-only -DSPEC_LP64`
854.graph500_s: `-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,-allow-multiple-definition -Wl,-mllvm -Wl,-extra-inliner -O3 -flto
-march=znver5 -fveclib=AMDLIBM -ffast-math -zopt -fremap-arrays
-fstrip-mining -fstruct-layout=7 -mllvm -inline-threshold=1000
-mllvm -reduce-array-computations=3 -mllvm -unroll-threshold=50
-fopenmp -DSPEC_OPENMP -lamdalloc -lamdlibm -fopenmp=libomp -lomp
```

C++ benchmarks:
```
-m64 -std=c++17 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false -O3 -flto -march=znver5
-fveclib=AMDLIBM -ffast-math -zopt -mllvm -unroll-threshold=100
-mllvm -loop-unswitch-threshold=200000
-mllvm -reduce-array-computations=3 -fopenmp -DSPEC_OPENMP
-fvirtual-function-elimination -fvisibility=hidden -lamdalloc
-lamdlibm -fopenmp=libomp -lomp
```

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
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false -O3 -flto -march=znver5
-fveclib=AMDLIBM -ffast-math -zopt -fremap-arrays -fstrip-mining
-fstruct-layout=7 -mllvm -inline-threshold=1000
-mllvm -reduce-array-computations=3 -mllvm -unroll-threshold=50
-mllvm -unroll-threshold=100 -mllvm -loop-unswitch-threshold=200000
-fopenmp -DSPEC_OPENMP -fvirtual-function-elimination
-fvisibility=hidden -lamdalloc -lamdlibm -fopenmp=libomp -lomp
```

Base Other Flags

C benchmarks:
```
-Wno-return-type
```

(Continued on next page)

Base Other Flags (Continued)

Benchmarks using both C and C++:
`-Wno-return-type`

Peak Optimization Flags

C benchmarks:

854.graph500_s: `basepeak = yes`

C++ benchmarks:

807.ntest_s: `basepeak = yes`

827.cppcheck_s: `basepeak = yes`

853.ns3_s: `basepeak = yes`

Benchmarks using both C and C++:

801.xz_s: `basepeak = yes`

817.flac_s: `basepeak = yes`

821.gcc_s: `basepeak = yes`

823.llvm_s: `basepeak = yes`

829.abc_s: `basepeak = yes`

834.vpr_s: `basepeak = yes`

835.gem5_s: `basepeak = yes`

838.diamond_s: `basepeak = yes`

846.minizinc_s: `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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