SPEC CPU®2026 Integer Rate Result

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Hewlett Packard Enterprise

(Test Sponsor: HPE)

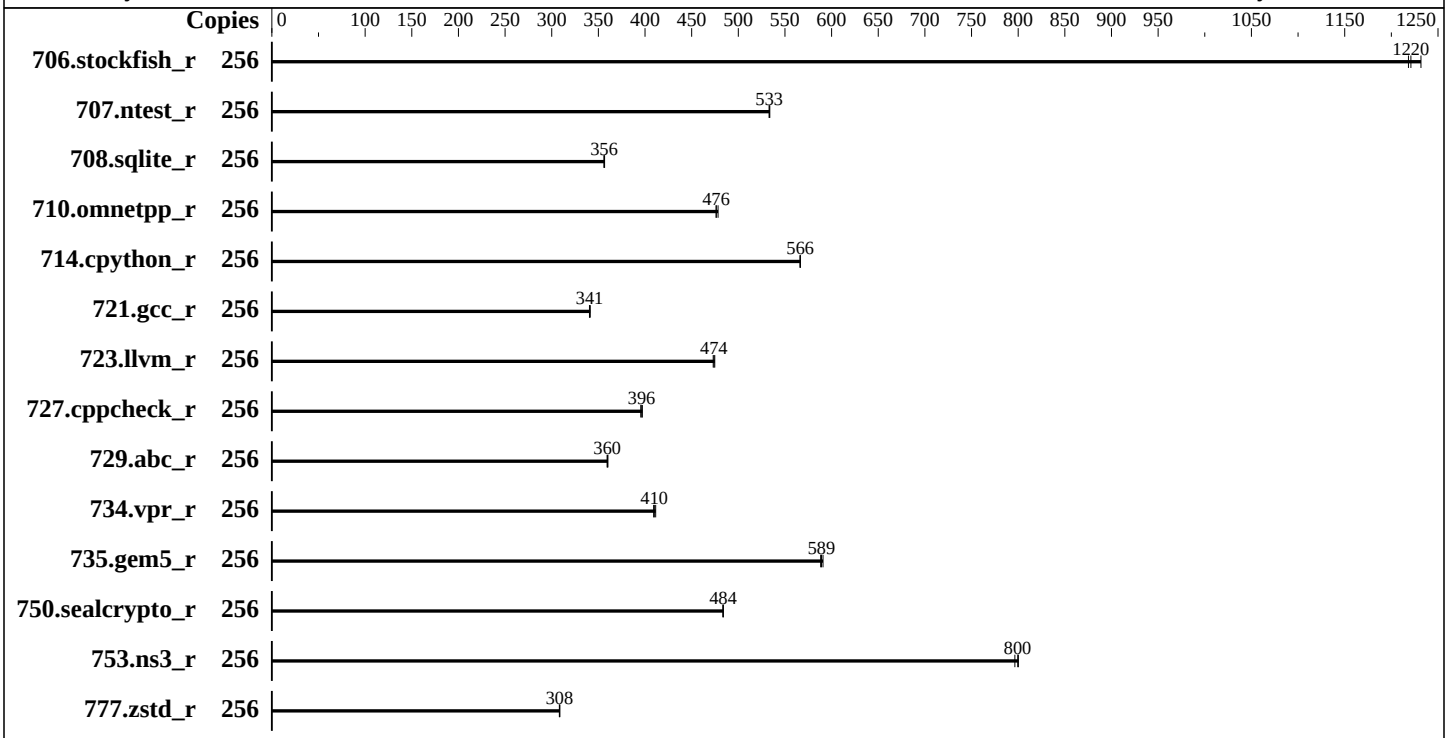
ProLiant Compute DL325 Gen12
(2.70 GHz, AMD EPYC 9755)

SPECrate®2026_int_base = 486

SPECrate®2026_int_peak = 486

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

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



Hardware

CPU Name:	AMD EPYC 9755
Max MHz:	4100
Nominal:	2700
Enabled:	128 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:	512 MB I+D on chip per chip, 32 MB shared / 8 cores
Other:	None
Memory:	1536 GB (12 x 128 GB 2Rx4 PC5-6400B-R, running at 5200)
Storage:	1 x 1.6 TB NVMe SSD
Cooling:	CLC
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 v1.34 released Nov-2025
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	256	**264**	**1220**	265	1220	262	1230	256	**264**	**1220**	265	1220	262	1230
707.ntest_r	256	284	533	284	534	**284**	**533**	256	284	533	284	534	**284**	**533**
708.sqlite_r	256	380	356	379	357	**379**	**356**	256	380	356	379	357	**379**	**356**
710.omnetpp_r	256	260	478	**261**	**476**	261	476	256	260	478	**261**	**476**	261	476
714.cpython_r	256	216	566	217	566	**216**	**566**	256	216	566	217	566	**216**	**566**
721.gcc_r	256	516	340	515	341	**516**	**341**	256	516	340	515	341	**516**	**341**
723.llvm_r	256	273	475	274	473	**274**	**474**	256	273	475	274	473	**274**	**474**
727.cppcheck_r	256	231	397	232	395	**232**	**396**	256	231	397	232	395	**232**	**396**
729.abc_r	256	**327**	**360**	326	360	327	359	256	**327**	**360**	326	360	327	359
734.vpr_r	256	287	411	288	409	**288**	**410**	256	287	411	288	409	**288**	**410**
735.gem5_r	256	211	591	**212**	**589**	212	588	256	211	591	**212**	**589**	212	588
750.sealcrypto_r	256	284	484	**284**	**484**	284	484	256	284	484	**284**	**484**	284	484
753.ns3_r	256	197	796	196	800	**196**	**800**	256	197	796	196	800	**196**	**800**
777.zstd_r	256	**535**	**308**	534	309	535	308	256	**535**	**308**	534	309	535	308

SPECrate®2026_int_base = 486

SPECrate®2026_int_peak = 486

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 High Performance Compute (HPC)
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
Last-Level Cache (LLC) as NUMA Node set to Enabled
NUMA memory domains per socket set to Four memory domains per socket
Thermal Configuration set to Enhanced CPU Cooling
AMD Periodic Directory Rinse set to Periodic
 Workload Profile set to Custom
  Power Regulator set to OS Control Mode
```

(Continued on next page)

Platform Notes (Continued)

```
Sysinfo program /home/cpu2026/bin/sysinfo
Rev: 069f95da7e7f5d81b2ce48a82150e54f
running on admin1 Thu Jan 29 11:33:03 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
   11:33:03 up  6:24, 11 users,  load average: 42.69, 95.99, 110.74
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU  WHAT
  admin1            172.16.0.111     11:32    4:44m  0.00s   ?    sshd: admin1 [priv]
  admin1            172.16.0.111     11:32    4:44m  0.00s   ?    sshd: admin1 [priv]
  admin1            172.16.0.111     11:32    4:44m  0.00s   ?    sshd: admin1 [priv]
  admin1            172.16.0.111     11:32    4:44m  0.00s   ?    sshd: admin1 [priv]
  admin1            172.16.0.111     06:48    4:44m  0.00s  0.01s sshd: admin1 [priv]
```

(Continued on next page)

Platform Notes (Continued)

```
  admin1            172.16.0.111     06:48    4:44m  0.00s  0.01s sshd: admin1 [priv]
  admin1            172.16.0.111     06:48    4:44m  0.00s  0.01s sshd: admin1 [priv]
  admin1            172.16.0.111     06:48    4:44m  0.00s  0.01s sshd: admin1 [priv]
  admin1            172.16.0.100     05:17    4:44m  0.00s  0.04s sshd: admin1 [priv]
  admin1            172.16.0.100     05:15    4:44m  0.00s  0.06s sshd: admin1 [priv]
  admin1   tty1     -                05:11    6:21m  0.05s  0.02s -bash

------------------------------------------------------------
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              6190756
  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
 /bin/bash $SPEC/run_intrate_sh.sh
 sudo ./run_intrate.py
 python3 ./run_intrate.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 9755 128-Core Processor
```

(Continued on next page)

Platform Notes (Continued)

```
     vendor_id       : AuthenticAMD
     cpu family      : 26
     model           : 2
     stepping        : 1
     microcode       : 0xb00215a
     bugs            : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
     TLB size        : 192 4K pages
     cpu cores       : 128
     siblings        : 256
     1 physical ids (chips)
     256 processors (hardware threads)
     physical id 0: core ids 0-127
     physical id 0: apicids 0-255
   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):                               256
   On-line CPU(s) list:                  0-255
   Vendor ID:                            AuthenticAMD
   BIOS Vendor ID:                       Advanced Micro Devices, Inc.
   Model name:                           AMD EPYC 9755 128-Core Processor
   BIOS Model name:                    AMD EPYC 9755 128-Core Processor                CPU @ 2.7GHz
   BIOS CPU family:                      107
   CPU family:                           26
   Model:                                2
   Thread(s) per core:                   2
   Core(s) per socket:                   128
   Socket(s):                            1
   Stepping:                             1
   Frequency boost:                      enabled
   CPU(s) scaling MHz:                   101%
   CPU max MHz:                          2700.0000
   CPU min MHz:                          1500.0000
   BogoMIPS:                             5392.00
   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
```

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Platform Notes (Continued)

```
                    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
                    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:                        6 MiB (128 instances)
  L1i cache:                        4 MiB (128 instances)
  L2 cache:                         128 MiB (128 instances)
  L3 cache:                         512 MiB (16 instances)
  NUMA node(s):                     16
  NUMA node0 CPU(s):                0-7,128-135
  NUMA node1 CPU(s):                8-15,136-143
  NUMA node2 CPU(s):                16-23,144-151
  NUMA node3 CPU(s):                24-31,152-159
  NUMA node4 CPU(s):                32-39,160-167
  NUMA node5 CPU(s):                40-47,168-175
  NUMA node6 CPU(s):                48-55,176-183
  NUMA node7 CPU(s):                56-63,184-191
  NUMA node8 CPU(s):                64-71,192-199
  NUMA node9 CPU(s):                72-79,200-207
  NUMA node10 CPU(s):               80-87,208-215
  NUMA node11 CPU(s):               88-95,216-223
  NUMA node12 CPU(s):               96-103,224-231
  NUMA node13 CPU(s):               104-111,232-239
  NUMA node14 CPU(s):               112-119,240-247
  NUMA node15 CPU(s):               120-127,248-255
  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
```

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Platform Notes (Continued)

```
  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       6M   12 Data            1    64        1             64
     L1i       32K       4M    8 Instruction     1    64        1             64
     L2         1M     128M   16 Unified         2  1024        1             64
     L3        32M     512M   16 Unified         3 32768        1             64

------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 16 nodes (0-15)
  node 0 cpus: 0-7,128-135
  node 0 size: 96447 MB
  node 0 free: 95369 MB
  node 1 cpus: 8-15,136-143
  node 1 size: 96762 MB
  node 1 free: 96019 MB
  node 2 cpus: 16-23,144-151
  node 2 size: 96762 MB
  node 2 free: 96023 MB
  node 3 cpus: 24-31,152-159
  node 3 size: 96762 MB
  node 3 free: 95988 MB
  node 4 cpus: 32-39,160-167
  node 4 size: 96762 MB
  node 4 free: 96053 MB
  node 5 cpus: 40-47,168-175
  node 5 size: 96762 MB
  node 5 free: 95925 MB
  node 6 cpus: 48-55,176-183
  node 6 size: 96762 MB
  node 6 free: 96030 MB
  node 7 cpus: 56-63,184-191
  node 7 size: 96762 MB
  node 7 free: 95577 MB
  node 8 cpus: 64-71,192-199
  node 8 size: 96762 MB
  node 8 free: 96035 MB
  node 9 cpus: 72-79,200-207
  node 9 size: 96762 MB
```

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Platform Notes (Continued)

```
   node 9 free: 95733 MB
   node 10 cpus: 80-87,208-215
   node 10 size: 96762 MB
   node 10 free: 95636 MB
   node 11 cpus: 88-95,216-223
   node 11 size: 96762 MB
   node 11 free: 96044 MB
   node 12 cpus: 96-103,224-231
   node 12 size: 96719 MB
   node 12 free: 95962 MB
   node 13 cpus: 104-111,232-239
   node 13 size: 96762 MB
   node 13 free: 96067 MB
   node 14 cpus: 112-119,240-247
   node 14 size: 96762 MB
   node 14 free: 95992 MB
   node 15 cpus: 120-127,248-255
   node 15 size: 96691 MB
   node 15 free: 95963 MB
   node distances:
   node   0   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15
     0:  10  11  11  11  12  12  12  12  12  12  12  12  12  12  12  12
     1:  11  10  11  11  12  12  12  12  12  12  12  12  12  12  12  12
     2:  11  11  10  11  12  12  12  12  12  12  12  12  12  12  12  12
     3:  11  11  11  10  12  12  12  12  12  12  12  12  12  12  12  12
     4:  12  12  12  12  10  11  11  11  12  12  12  12  12  12  12  12
     5:  12  12  12  12  11  10  11  11  12  12  12  12  12  12  12  12
     6:  12  12  12  12  11  11  10  11  12  12  12  12  12  12  12  12
     7:  12  12  12  12  11  11  11  10  12  12  12  12  12  12  12  12
     8:  12  12  12  12  12  12  12  12  10  11  11  11  12  12  12  12
     9:  12  12  12  12  12  12  12  12  11  10  11  11  12  12  12  12
    10:  12  12  12  12  12  12  12  12  11  11  10  11  12  12  12  12
    11:  12  12  12  12  12  12  12  12  11  11  11  10  12  12  12  12
    12:  12  12  12  12  12  12  12  12  12  12  12  12  10  11  11  11
    13:  12  12  12  12  12  12  12  12  12  12  12  12  11  10  11  11
    14:  12  12  12  12  12  12  12  12  12  12  12  12  11  11  10  11
    15:  12  12  12  12  12  12  12  12  12  12  12  12  11  11  11  10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       1584915404 kB

------------------------------------------------------------
10. who -r
  run-level 5 Jan 29 05:09

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

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Platform Notes (Continued)

```
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-6.8.0-90-generic
  root=UUID=55095485-7cab-4cdb-a7f6-908dc16f7253
  ro

------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 227:
    current policy: frequency should be within 1.50 GHz and 2.70 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:  2700MHz

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

(Continued on next page)

Platform Notes (Continued)

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

------------------------------------------------------------
19. OS release
  From /etc/*-release /etc/*-version
  os-release Ubuntu 24.04.3 LTS

------------------------------------------------------------
20. Disk information
SPEC is set to: /home/cpu2026
```

(Continued on next page)

Platform Notes (Continued)

```
   Filesystem     Type  Size  Used Avail Use% Mounted on
   /dev/nvme1n1p2 ext4  1.5T   32G  1.4T   3% /

 ------------------------------------------------------------
 21. /sys/devices/virtual/dmi/id
     Vendor:         HPE
     Product:        HPE ProLiant Compute DL325 Gen12
     Product Family: ProLiant
     Serial:         OU2MZL2EWE

 ------------------------------------------------------------
 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:
      4x Samsung M321RAJA0MB2-CCPEC 128 GB 2 rank 6400, configured at 5200
      6x Samsung M321RAJA0MB2-CCPKC 128 GB 2 rank 6400, configured at 5200
      2x Samsung M321RAJA0MB2-CCPPC 128 GB 2 rank 6400, configured at 5200


 ------------------------------------------------------------
 23. BIOS
 (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:       HPE
    BIOS Version:      1.34
    BIOS Date:         11/28/2025
    BIOS Revision:     1.34
    Firmware Revision: 1.18
```

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)
------------------------------------------------------------------------------
```

(Continued on next page)

Compiler Version Notes (Continued)

```
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
-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

(Continued on next page)

Peak Optimization Flags (Continued)

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`

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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