SPEC CPU®2026 Integer Rate Result

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Dell Inc.

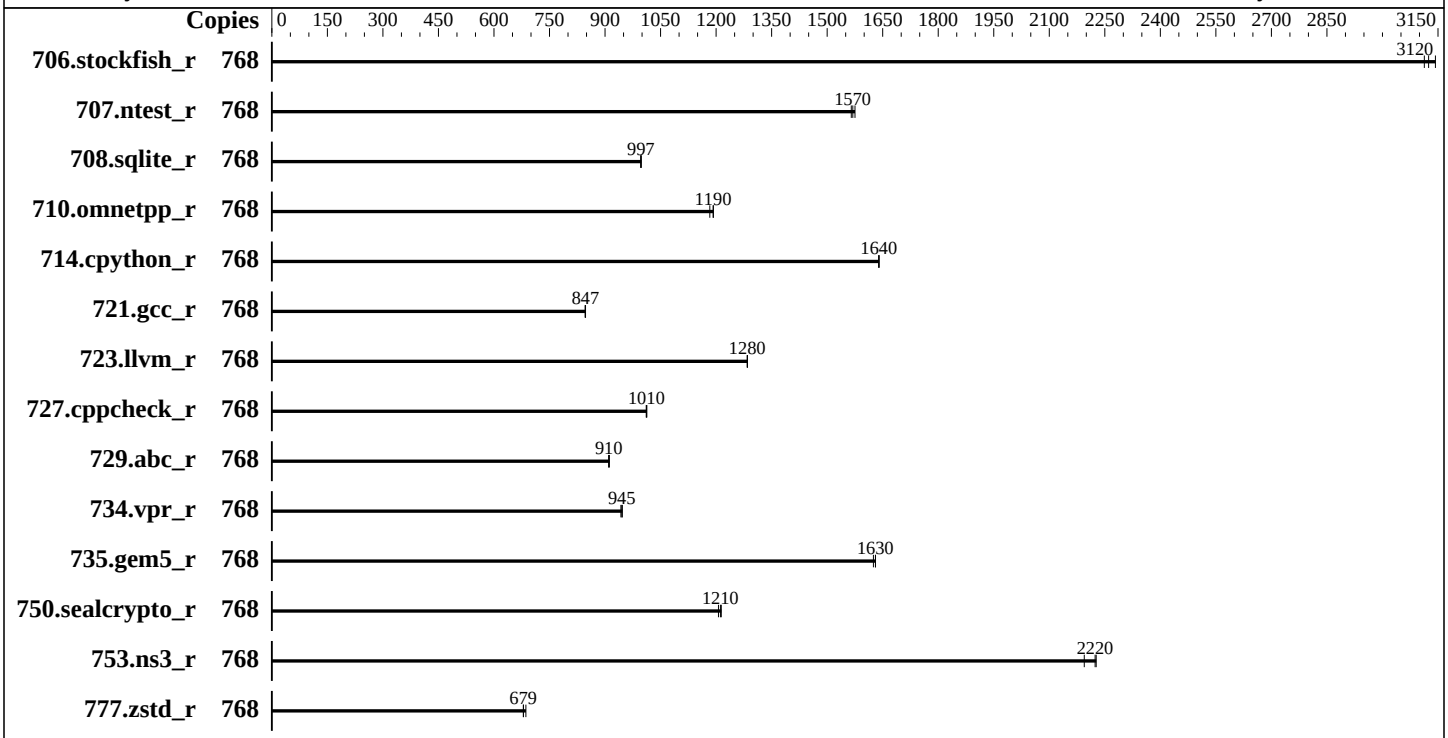
PowerEdge M7725 (AMD EPYC 9965 192-Core Processor)

SPECrate®2026_int_base = 1270

SPECrate®2026_int_peak = 1270

CPU2026 License: 6573
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

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



Hardware

CPU Name:	AMD EPYC 9965
Max MHz:	3700
Nominal:	2250
Enabled:	384 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:	384 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:	350 GB on tmpfs
Cooling:	DLC
Other:	None

Software

OS:	Ubuntu 24.04.1 LTS 6.8.0-57-generic
Compiler:	C/C++/Fortran: Version 5.1.0 of AOCC
Compiler Category:	Vendor
Firmware:	Version 1.5.3 released Oct-2025
File System:	tmpfs
System State:	Run level 5 (graphical multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	None
Power Management:	BIOS and OS set to prefer performance at the cost of additional power usage.

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
706.stockfish_r	768	311	3110	**310**	**3120**	308	3140	768	311	3110	**310**	**3120**	308	3140
707.ntest_r	768	289	1580	**290**	**1570**	290	1570	768	289	1580	**290**	**1570**	290	1570
708.sqlite_r	768	406	998	**407**	**997**	407	996	768	406	998	**407**	**997**	407	996
710.omnetpp_r	768	**313**	**1190**	316	1180	313	1190	768	**313**	**1190**	316	1180	313	1190
714.cpython_r	768	**224**	**1640**	224	1640	224	1640	768	**224**	**1640**	224	1640	224	1640
721.gcc_r	768	**622**	**847**	622	847	623	846	768	**622**	**847**	622	847	623	846
723.llvm_r	768	303	1280	**303**	**1280**	303	1280	768	303	1280	**303**	**1280**	303	1280
727.cppcheck_r	768	**272**	**1010**	273	1010	272	1010	768	**272**	**1010**	273	1010	272	1010
729.abc_r	768	**387**	**910**	387	910	387	912	768	**387**	**910**	387	910	387	912
734.vpr_r	768	**375**	**945**	374	947	376	943	768	**375**	**945**	374	947	376	943
735.gem5_r	768	**229**	**1630**	230	1620	229	1630	768	**229**	**1630**	230	1620	229	1630
750.sealcrypto_r	768	341	1210	**340**	**1210**	339	1210	768	341	1210	**340**	**1210**	339	1210
753.ns3_r	768	211	2230	215	2190	**212**	**2220**	768	211	2230	215	2190	**212**	**2220**
777.zstd_r	768	**728**	**679**	721	686	728	679	768	**728**	**679**	721	686	728	679

SPECrate®2026_int_base = **1270**

SPECrate®2026_int_peak = **1270**

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.
```

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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 =
     "/mnt/ramdisk/cpu2026rc2/amd_rate_aocc510_znver5_A_lib/lib:/mnt/ramdisk/
     cpu2026rc2/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
 Benchmark run from a 350 GB ramdisk created with the cmd: "mount -t tmpfs -o size=350G tmpfs /mnt/ramdisk"
```

Platform Notes

```
 BIOS Settings:
              NUMA Nodes Per Socket : 4

                     System Profile : Custom
               CPU Power Management : Maximum Performance
                           C-States : Disabled
                Memory Patrol Scrub : Disabled
  PCI ASPM L1 Link Power Management : Disabled
    Periodic Directory Rinse Tuning : Blended
                Determinism Control : Manual
                 Determinism Slider : Power Determinism
                     Optimizer Mode : Enabled
                Adaptive Allocation : Enabled
                 Dram Refresh Delay : Performance

 Sysinfo program /mnt/ramdisk/cpu2026rc2/bin/sysinfo
 Rev: 069f95da7e7f5d81b2ce48a82150e54f
 running on M772501-M7725 Thu Feb  5 10:17:12 2026
```

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Platform Notes (Continued)

```
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 (255.4-1ubuntu8.4)
12. Failed units, from systemctl list-units --state=failed
13. Services, from systemctl list-unit-files
14. Linux kernel boot-time arguments, from /proc/cmdline
15. cpupower frequency-info
16. tuned-adm active
17. sysctl
18. /sys/kernel/mm/transparent_hugepage
19. /sys/kernel/mm/transparent_hugepage/khugepaged
20. OS release
21. Disk information
22. /sys/devices/virtual/dmi/id
23. dmidecode
24. BIOS
------------------------------------------------------------

------------------------------------------------------------
1. uname -srvm
  Linux 6.8.0-57-generic #59-Ubuntu SMP PREEMPT_DYNAMIC Sat Mar 15 17:40:59 UTC 2025 x86_64

------------------------------------------------------------
2. w
   10:17:12 up 3 min,  1 user,  load average: 0.40, 0.15, 0.05
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU  WHAT
 root     tty1     -                10:14   45.00s  2.62s  1.28s /bin/bash ./amd_rate_aocc510_znver5_A1.sh

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

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

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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              6187502
   nofiles              1024
   vmemory(kbytes)      unlimited
   locks                unlimited
   rtprio               0

 ------------------------------------------------------------
 5. sysinfo process ancestry
  /sbin/init
  /bin/login -p --
  -bash
  /bin/bash /home/DellFiles/bin/DELL_rate.sh
  /bin/bash /home/DellFiles/bin/dell-run-main.sh rate
  /bin/bash /home/DellFiles/bin/dell-run-main.sh rate
  /bin/bash /home/DellFiles/bin/AMD/dell-run-speccpu.sh rate --define DL-VERS=7.0_T01 --output_format
    html,pdf,txt
  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 --define
    DL-VERS=7.0_T01 --output_format html,pdf,txt intrate
  runcpu --configfile amd_rate_aocc510_znver5_A1.cfg --tune base --reportable --iterations 3 --define
    DL-VERS=7.0_T01 --output_format html,pdf,txt --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 = /mnt/ramdisk/cpu2026rc2

 ------------------------------------------------------------
 6. /proc/cpuinfo
     model name      : AMD EPYC 9965 192-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       : 192
     siblings        : 384
```

(Continued on next page)

Platform Notes (Continued)

```
     2 physical ids (chips)
     768 processors (hardware threads)
     physical id 0: core ids 0-191
     physical id 1: core ids 0-191
     physical id 0: apicids 0-383
     physical id 1: apicids 512-895
   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):                               768
   On-line CPU(s) list:                  0-767
   Vendor ID:                            AuthenticAMD
   BIOS Vendor ID:                       AMD
   Model name:                           AMD EPYC 9965 192-Core Processor
   BIOS Model name:                    AMD EPYC 9965 192-Core Processor                CPU @ 2.2GHz
   BIOS CPU family:                      107
   CPU family:                           26
   Model:                                17
   Thread(s) per core:                   2
   Core(s) per socket:                   192
   Socket(s):                            2
   Stepping:                             0
   BogoMIPS:                             4492.90
   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 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
```

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Platform Notes (Continued)

```
                                    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 avx512_vp2intersect
                                           flush_l1d debug_swap
  Virtualization:                          AMD-V
  L1d cache:                               18 MiB (384 instances)
  L1i cache:                               12 MiB (384 instances)
  L2 cache:                                384 MiB (384 instances)
  L3 cache:                                768 MiB (24 instances)
  NUMA node(s):                            8
  NUMA node0 CPU(s):                       0-47,384-431
  NUMA node1 CPU(s):                       48-95,432-479
  NUMA node2 CPU(s):                       96-143,480-527
  NUMA node3 CPU(s):                       144-191,528-575
  NUMA node4 CPU(s):                       192-239,576-623
  NUMA node5 CPU(s):                       240-287,624-671
  NUMA node6 CPU(s):                       288-335,672-719
  NUMA node7 CPU(s):                       336-383,720-767
  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

From lscpu --cache:
     NAME ONE-SIZE ALL-SIZE WAYS TYPE        LEVEL  SETS PHY-LINE COHERENCY-SIZE
     L1d       48K      18M   12 Data            1    64        1             64
     L1i       32K      12M    8 Instruction     1    64        1             64
     L2         1M     384M   16 Unified         2  1024        1             64
     L3        32M     768M   16 Unified         3 32768        1             64

------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 8 nodes (0-7)
  node 0 cpus: 0-47,384-431
  node 0 size: 192583 MB
```

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Platform Notes (Continued)

```
   node 0 free: 190608 MB
   node 1 cpus: 48-95,432-479
   node 1 size: 193497 MB
   node 1 free: 192690 MB
   node 2 cpus: 96-143,480-527
   node 2 size: 193497 MB
   node 2 free: 192763 MB
   node 3 cpus: 144-191,528-575
   node 3 size: 193481 MB
   node 3 free: 192730 MB
   node 4 cpus: 192-239,576-623
   node 4 size: 193497 MB
   node 4 free: 182048 MB
   node 5 cpus: 240-287,624-671
   node 5 size: 193497 MB
   node 5 free: 192697 MB
   node 6 cpus: 288-335,672-719
   node 6 size: 193497 MB
   node 6 free: 192671 MB
   node 7 cpus: 336-383,720-767
   node 7 size: 193398 MB
   node 7 free: 192657 MB
   node distances:
   node   0   1   2   3   4   5   6   7
     0:  10  12  12  12  32  32  32  32
     1:  12  10  12  12  32  32  32  32
     2:  12  12  10  12  32  32  32  32
     3:  12  12  12  10  32  32  32  32
     4:  32  32  32  32  10  12  12  12
     5:  32  32  32  32  12  10  12  12
     6:  32  32  32  32  12  12  10  12
     7:  32  32  32  32  12  12  12  10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       1584076896 kB

------------------------------------------------------------
10. who -r
  run-level 5 Feb 5 10:13

------------------------------------------------------------
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.4)
  Default Target  Status
  graphical       degraded

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

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Platform Notes (Continued)

```
12. Failed units, from systemctl list-units --state=failed
    UNIT                LOAD   ACTIVE SUB    DESCRIPTION
  * cxl-monitor.service loaded failed failed CXL Monitor Daemon
  Legend: LOAD   -> Reflects whether the unit definition was properly loaded.
          ACTIVE -> The high-level unit activation state, i.e. generalization of SUB.
          SUB    -> The low-level unit activation state, values depend on unit type.
  1 loaded units listed.

------------------------------------------------------------
13. 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 cxl-monitor dmesg e2scrub_reap finalrd getty@
                   gpu-manager grub-common grub-initrd-fallback keyboard-setup lm-sensors lvm2-monitor
                   multipathd networkd-dispatcher open-iscsi open-vm-tools pollinate rsyslog secureboot-db
                   setvtrgb sysstat systemd-networkd systemd-networkd-wait-online systemd-pstore
                   systemd-resolved systemd-timesyncd thermald tuned ua-reboot-cmds ubuntu-advantage udisks2
                   ufw 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 upower
  indirect         systemd-sysupdate systemd-sysupdate-reboot uuidd
  masked           cryptdisks cryptdisks-early hwclock multipath-tools-boot screen-cleanup sudo x11-common

------------------------------------------------------------
14. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/vmlinuz-6.8.0-57-generic
  root=/dev/mapper/ubuntu--vg-ubuntu--lv
  ro

------------------------------------------------------------
15. cpupower frequency-info
  analyzing CPU 34:
    Unable to determine current policy
    boost state support:
      Supported: yes
      Active: yes
      Boost States: 0
      Total States: 3
      Pstate-P0:  2250MHz

------------------------------------------------------------
16. tuned-adm active
```

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Platform Notes (Continued)

```
  Current active profile: throughput-performance

------------------------------------------------------------
17. 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

------------------------------------------------------------
18. /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

------------------------------------------------------------
19. /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

------------------------------------------------------------
20. OS release
  From /etc/*-release /etc/*-version
  os-release Ubuntu 24.04.1 LTS

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

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Platform Notes (Continued)

```
 21. Disk information
 SPEC is set to: /mnt/ramdisk/cpu2026rc2
   Filesystem     Type   Size  Used Avail Use% Mounted on
   tmpfs          tmpfs  350G   10G  341G   3% /mnt/ramdisk

 ------------------------------------------------------------
 22. /sys/devices/virtual/dmi/id
     Vendor:         Dell Inc.
     Product:        PowerEdge M7725
     Product Family: PowerEdge
     Serial:         M772501

 ------------------------------------------------------------
 23. 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 80CE000080CE M321R8GA0PB1-CCPQC 64 GB 2 rank 6400
      23x 80CE000080CE M321R8GA0PB2-CCPKC 64 GB 2 rank 6400


 ------------------------------------------------------------
 24. BIOS
 (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:       Dell Inc.
    BIOS Version:      1.5.3
    BIOS Date:         10/29/2025
    BIOS Revision:     1.5
```

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

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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/aocc-flags.2026-05-04.html`
`http://www.spec.org/cpu2026/results/flags/Dell-Platform-Flags-PowerEdge-AMD-EPYC-v1.8.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2026/results/flags/aocc-flags.2026-05-04.xml`
`http://www.spec.org/cpu2026/results/flags/Dell-Platform-Flags-PowerEdge-AMD-EPYC-v1.8.xml`

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