SPEC CPU®2026 Integer Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

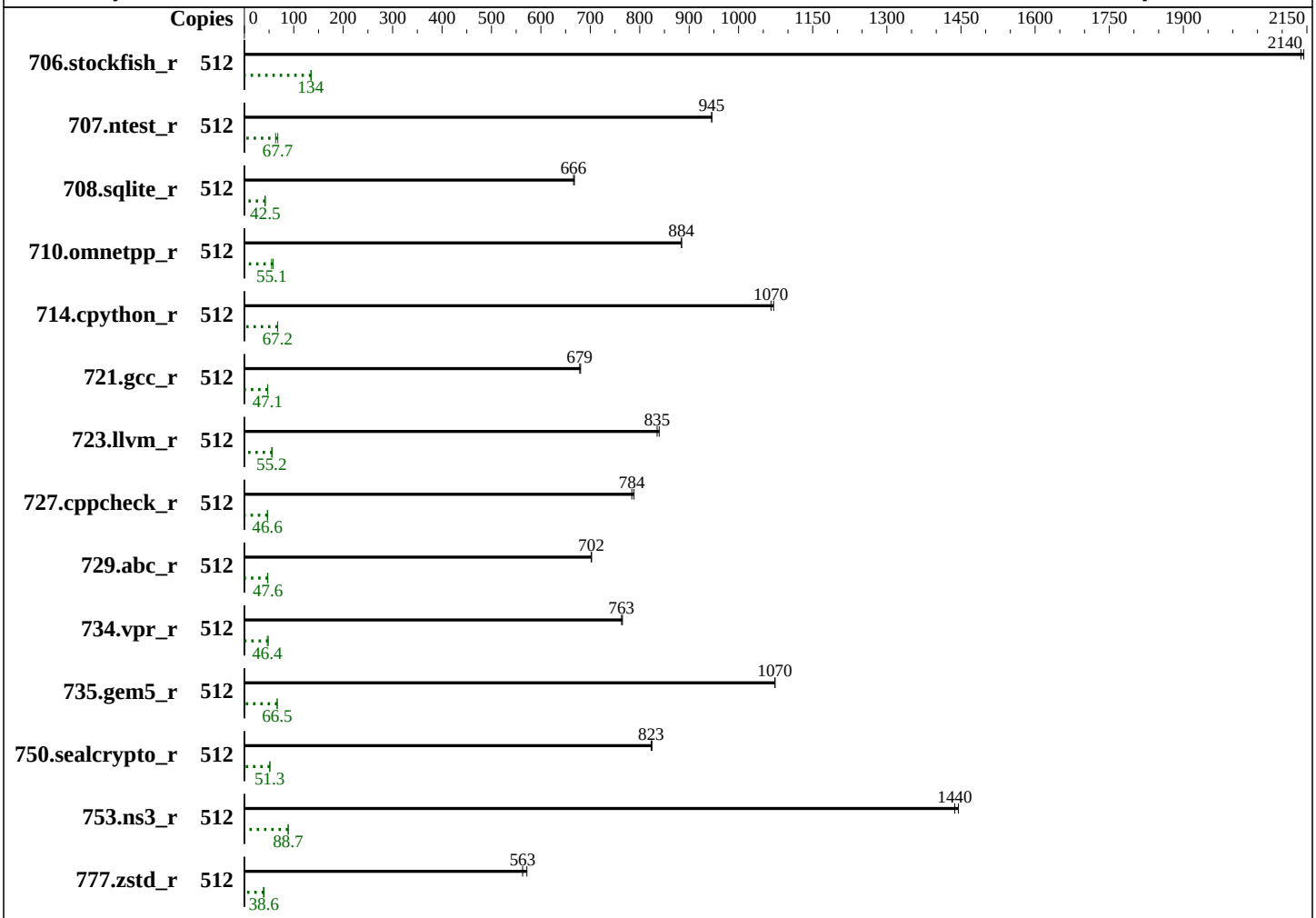
Dell Inc.

PowerEdge R7725 (AMD EPYC 9755 128-Core Processor)

SPECrate®2026_int_base =	896
SPECrate®2026_int_energy_base =	57.6
SPECrate®2026_int_peak =	896
SPECrate®2026_int_energy_peak =	57.6

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

Test Date: Feb-2026
Hardware Availability: Nov-2024
Software Availability: Jan-2026



Hardware

CPU Name:	AMD EPYC 9755
Max MHz:	4100
Nominal:	2700
Enabled:	256 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:	512 MB I+D on chip per chip, 32 MB shared / 8 cores
Other:	None
Memory:	1536 GB (24 x 64 GB 2Rx4 PC5-6400B-R)

(Continued on next page)

Software

OS:	Ubuntu 24.04 LTS 6.8.0-87-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 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	None
Power Management:	BIOS and OS set to balanced performance

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Hardware (Continued)

Storage: 260 GB on tmpfs
Cooling: Air
Other: None

Power

Max. Power (W): 1614.1
Idle Power (W): 258.74
Min. Temperature (C): 21.38
Elevation (m): 255
Line Standard: 220 V / 50 Hz / 1 phase / 3 wires
Provisioning: Line-powered

Power Settings

Management FW: Version 1.20.80.50 of IDRAC
Memory Mode: Normal

Power-Relevant Hardware

Power Supply: 1 x 3200 W (non-redundant)
Details: 3200W Titanium Power supply DPN J0KHH
Backplane: 8 x EDSFF E3.S NVMe
Other Storage: 1 x NVMe E3 Drive
Storage Model #s: NVMe CD8P E3.S 1.92TB
NICs Installed: 1 x Intel E610-XT2 @ 10 Gbps (Dell P/N FC0HK)
NICs Enabled (FW/OS): 2 / 1
NICs Connected/Speed: 1 @ 10 Gb
Other HW Model #s: 6 x performance fans

Power Analyzer

Power Analyzer: 192.168.0.5:8888
Hardware Vendor: Yokogawa Meters and Instruments Corporation
Model: YokogawaWT310E
Serial Number: T11733386
Input Connection: Default
Metrology Institute: Tescom
Calibration By: NIST
Calibration Label: T126623
Calibration Date: 13-Aug-2025
PTDaemon® Version: 1.11.4 (5bcc369b; 2026-01-19)
Setup Description: Connected to PSU1
Current Ranges Used: 5A, 10A
Voltage Range Used: 300V

Temperature Meter

Temperature Meter: 192.168.0.5:8889
Hardware Vendor: Digi International Inc.
Model: DigiWATCHPORT_H
Serial Number: W13370940
Input Connection: USB
PTDaemon Version: 1.11.4 (5bcc369b; 2026-01-19)
Setup Description: 25 mm in front of SUT main airflow intake

Base Results Table

Benchmark	Copies	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power
706.stockfish_r	512	**302**	**2140**	**407**	**134**	**1350**	**1600**	301	2140	405	135	1350	1590						
707.ntest_r	512	320	946	402	63.2	1250	1330	**321**	**945**	**375**	**67.7**	**1170**	**1300**						
708.sqlite_r	512	**406**	**666**	**533**	**42.5**	**1310**	**1610**	405	668	547	41.5	1350	1610						
710.omnetpp_r	512	281	885	361	58.0	1280	1480	**281**	**884**	**380**	**55.1**	**1350**	**1470**						
714.cpython_r	512	229	1070	304	67.5	1330	1490	**230**	**1070**	**305**	**67.2**	**1330**	**1580**						
721.gcc_r	512	**518**	**679**	**629**	**47.1**	**1220**	**1440**	516	680	625	47.4	1210	1440						

Table continues on next page. Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

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SPECrate®2026_int_peak = 896

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

Test Date: Feb-2026
Hardware Availability: Nov-2024
Software Availability: Jan-2026

Base Results Table (Continued)

Benchmark	Copies	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power
723.llvm_r	512	**311**	**835**	**395**	**55.2**	**1270**	**1460**	309	839	384	56.7	1240	1440						
727.cppcheck_r	512	233	788	329	46.9	1410	1590	**234**	**784**	**331**	**46.6**	**1410**	**1580**						
729.abc_r	512	**335**	**702**	**414**	**47.6**	**1240**	**1420**	335	702	421	46.8	1260	1460						
734.vpr_r	512	309	765	409	48.4	1320	1540	**309**	**763**	**426**	**46.4**	**1380**	**1570**						
735.gem5_r	512	232	1070	315	66.2	1360	1490	**232**	**1070**	**314**	**66.5**	**1350**	**1510**						
750.sealcrypto_r	512	333	825	447	51.8	1340	1460	**333**	**823**	**452**	**51.3**	**1360**	**1460**						
753.ns3_r	512	217	1440	298	88.6	1370	1490	**218**	**1440**	**297**	**88.7**	**1360**	**1490**						
777.zstd_r	512	577	572	697	39.7	1210	1540	**586**	**563**	**717**	**38.6**	**1220**	**1540**						

SPECrate®2026_int_base = 896

SPECrate®2026_int_energy_base = 57.6

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

Peak Results Table

Benchmark	Copies	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power
706.stockfish_r	512	**302**	**2140**	**407**	**134**	**1350**	**1600**	301	2140	405	135	1350	1590						
707.ntest_r	512	320	946	402	63.2	1250	1330	**321**	**945**	**375**	**67.7**	**1170**	**1300**						
708.sqlite_r	512	**406**	**666**	**533**	**42.5**	**1310**	**1610**	405	668	547	41.5	1350	1610						
710.omnetpp_r	512	281	885	361	58.0	1280	1480	**281**	**884**	**380**	**55.1**	**1350**	**1470**						
714.cpython_r	512	229	1070	304	67.5	1330	1490	**230**	**1070**	**305**	**67.2**	**1330**	**1580**						
721.gcc_r	512	**518**	**679**	**629**	**47.1**	**1220**	**1440**	516	680	625	47.4	1210	1440						
723.llvm_r	512	**311**	**835**	**395**	**55.2**	**1270**	**1460**	309	839	384	56.7	1240	1440						
727.cppcheck_r	512	233	788	329	46.9	1410	1590	**234**	**784**	**331**	**46.6**	**1410**	**1580**						
729.abc_r	512	**335**	**702**	**414**	**47.6**	**1240**	**1420**	335	702	421	46.8	1260	1460						
734.vpr_r	512	309	765	409	48.4	1320	1540	**309**	**763**	**426**	**46.4**	**1380**	**1570**						
735.gem5_r	512	232	1070	315	66.2	1360	1490	**232**	**1070**	**314**	**66.5**	**1350**	**1510**						
750.sealcrypto_r	512	333	825	447	51.8	1340	1460	**333**	**823**	**452**	**51.3**	**1360**	**1460**						
753.ns3_r	512	217	1440	298	88.6	1370	1490	**218**	**1440**	**297**	**88.7**	**1360**	**1490**						
777.zstd_r	512	577	572	697	39.7	1210	1540	**586**	**563**	**717**	**38.6**	**1220**	**1540**						

SPECrate®2026_int_peak = 896

SPECrate®2026_int_energy_peak = 57.6

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.
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 260 GB ramdisk created with the cmd: "mount -t tmpfs -o size=260G tmpfs /mnt/ramdisk"
```

Platform Notes

```
 BIOS Settings:
             DRAM Refresh Delay : Performance
  DIMM Self Healing on -
     Uncorrectable Memory Error : Disabled

      Virtualization Technology : Disabled
          NUMA Nodes per Socket : 4
               Custom cTDP      : 450
```

(Continued on next page)

Platform Notes (Continued)

```
                System Profile : Custom
                     C-States : Enabled
           Memory Patrol Scrub : Disabled
    PCI ASPM L1 Link -
              Power Management : Enabled


 Sysinfo program /mnt/ramdisk/cpu2026rc2/bin/sysinfo
 Rev: 069f95da7e7f5d81b2ce48a82150e54f
 running on SLR7736-R7725 Fri Feb  6 16:32:20 2026

 SUT (System Under Test) info as seen by some common utilities.

 ------------------------------------------------------------
 Table of contents
 ------------------------------------------------------------
  1. uname -srvm
  2. w
  3. Username
  4. ulimit -a
  5. sysinfo process ancestry
  6. /proc/cpuinfo
  7. lscpu
  8. numactl --hardware
  9. /proc/meminfo
 10. who -r
 11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.8)
 12. Services, from systemctl list-unit-files
 13. Linux kernel boot-time arguments, from /proc/cmdline
 14. cpupower frequency-info
 15. sysctl
 16. /sys/kernel/mm/transparent_hugepage
 17. /sys/kernel/mm/transparent_hugepage/khugepaged
 18. OS release
 19. Disk information
 20. /sys/devices/virtual/dmi/id
 21. dmidecode
 22. BIOS
 ------------------------------------------------------------

 ------------------------------------------------------------
 1. uname -srvm
   Linux 6.8.0-87-generic #88-Ubuntu SMP PREEMPT_DYNAMIC Sat Oct 11 09:28:41 UTC 2025 x86_64

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

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Platform Notes (Continued)

```
 2. w
    16:32:20 up  2:56,  1 user,  load average: 0.33, 18.81, 107.62
   USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
   root     tty1     -                13:39   45.00s  3.37s  1.49s /bin/bash ./amd_rate_aocc510_znver5_A1.sh

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

 ------------------------------------------------------------
 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              6188453
   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 2 --define
    DL-VERS=7.0_T01 --output_format html,pdf,txt intrate
  runcpu --configfile amd_rate_aocc510_znver5_A1.cfg --tune base --reportable --iterations 2 --define
    DL-VERS=7.0_T01 --output_format html,pdf,txt --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
```

(Continued on next page)

Platform Notes (Continued)

```
------------------------------------------------------------
6. /proc/cpuinfo
    model name      : AMD EPYC 9755 128-Core Processor
    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
    2 physical ids (chips)
    512 processors (hardware threads)
    physical id 0: core ids 0-127
    physical id 1: core ids 0-127
    physical id 0: apicids 0-255
    physical id 1: apicids 256-511
  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):                               512
  On-line CPU(s) list:                  0-511
  Vendor ID:                            AuthenticAMD
  BIOS Vendor ID:                       AMD
  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):                            2
  Stepping:                             1
  CPU(s) scaling MHz:                   61%
  CPU max MHz:                          2700.0000
  CPU min MHz:                          1500.0000
```

(Continued on next page)

Platform Notes (Continued)

```
  BogoMIPS:                              5392.51
  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 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 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:                             12 MiB (256 instances)
  L1i cache:                             8 MiB (256 instances)
  L2 cache:                              256 MiB (256 instances)
  L3 cache:                              1 GiB (32 instances)
  NUMA node(s):                          8
  NUMA node0 CPU(s):                     0-31,256-287
  NUMA node1 CPU(s):                     32-63,288-319
  NUMA node2 CPU(s):                     64-95,320-351
  NUMA node3 CPU(s):                     96-127,352-383
  NUMA node4 CPU(s):                     128-159,384-415
  NUMA node5 CPU(s):                     160-191,416-447
  NUMA node6 CPU(s):                     192-223,448-479
  NUMA node7 CPU(s):                     224-255,480-511
  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      12M   12 Data            1    64        1             64
     L1i       32K       8M    8 Instruction     1    64        1             64
     L2         1M     256M   16 Unified         2  1024        1             64
     L3        32M       1G   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: 0-31,256-287
  node 0 size: 192729 MB
  node 0 free: 190856 MB
  node 1 cpus: 32-63,288-319
  node 1 size: 193510 MB
  node 1 free: 179744 MB
  node 2 cpus: 64-95,320-351
  node 2 size: 193510 MB
  node 2 free: 192540 MB
  node 3 cpus: 96-127,352-383
  node 3 size: 193450 MB
  node 3 free: 192374 MB
  node 4 cpus: 128-159,384-415
  node 4 size: 193510 MB
  node 4 free: 192534 MB
  node 5 cpus: 160-191,416-447
  node 5 size: 193510 MB
  node 5 free: 192467 MB
  node 6 cpus: 192-223,448-479
  node 6 size: 193510 MB
  node 6 free: 192544 MB
  node 7 cpus: 224-255,480-511
  node 7 size: 193459 MB
  node 7 free: 192403 MB
  node distances:
  node   0   1   2   3   4   5   6   7
    0:  10  12  12  12  32  32  32  32
```

(Continued on next page)

Platform Notes (Continued)

```
     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:       1584323048 kB

------------------------------------------------------------
10. who -r
  run-level 3 Feb 6 13:36

------------------------------------------------------------
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.8)
  Default Target  Status
  multi-user      running

------------------------------------------------------------
12. Services, from systemctl list-unit-files
  STATE            UNIT FILES
  enabled          apparmor apport blk-availability cloud-config cloud-final cloud-init cloud-init-local
                   console-setup cron e2scrub_reap finalrd getty@ gpu-manager grub-common
                   grub-initrd-fallback keyboard-setup lm-sensors lvm2-monitor multipathd networkd-dispatcher
                   open-iscsi pollinate secureboot-db setvtrgb systemd-networkd systemd-networkd-wait-online
                   systemd-pstore systemd-resolved systemd-timesyncd thermald
  enabled-runtime  netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs
  disabled         console-getty debug-shell iscsid 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
  masked           cryptdisks cryptdisks-early hwclock multipath-tools-boot sudo x11-common

------------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-6.8.0-87-generic
  root=UUID=a7565640-059d-4a86-afc8-58cd1cadb778
  ro
```

(Continued on next page)

Platform Notes (Continued)

```
------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 65:
    current policy: frequency should be within 1.50 GHz and 2.70 GHz.
                    The governor "schedutil" may decide which speed to use
                    within this range.
    boost state support:
      Supported: no
      Active: no
      Boost States: 0
      Total States: 3
      Pstate-P0:  2700MHz

------------------------------------------------------------
15. 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

------------------------------------------------------------
16. /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

------------------------------------------------------------
17. /sys/kernel/mm/transparent_hugepage/khugepaged
  alloc_sleep_millisecs   60000
```

(Continued on next page)

Platform Notes (Continued)

```
   defrag                    1
   max_ptes_none           511
   max_ptes_shared         256
   max_ptes_swap            64
   pages_to_scan          4096
   scan_sleep_millisecs  10000

------------------------------------------------------------
18. OS release
  From /etc/*-release /etc/*-version
  os-release Ubuntu 24.04 LTS

------------------------------------------------------------
19. Disk information
SPEC is set to: /mnt/ramdisk/cpu2026rc2
  Filesystem     Type   Size  Used Avail Use% Mounted on
  tmpfs          tmpfs  260G   11G  250G   4% /mnt/ramdisk

------------------------------------------------------------
20. /sys/devices/virtual/dmi/id
    Vendor:         Dell Inc.
    Product:        PowerEdge R7725
    Product Family: PowerEdge
    Serial:         SLR7736

------------------------------------------------------------
21. 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:
     24x 80AD000080AD HMCG94AHBRA277N 64 GB 2 rank 6400


------------------------------------------------------------
22. 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)
------------------------------------------------------------------------------
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

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Base Optimization Flags (Continued)

Benchmarks using both C and C++ (continued):
-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

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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