



SPEC CPU®2026 Integer Speed Result

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Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL325 Gen11

(2.25 GHz, AMD EPYC 9754)

SPECspeed®2026_int_base = 4.77

SPECspeed®2026_int_peak = 4.77

CPU2026 License: 3

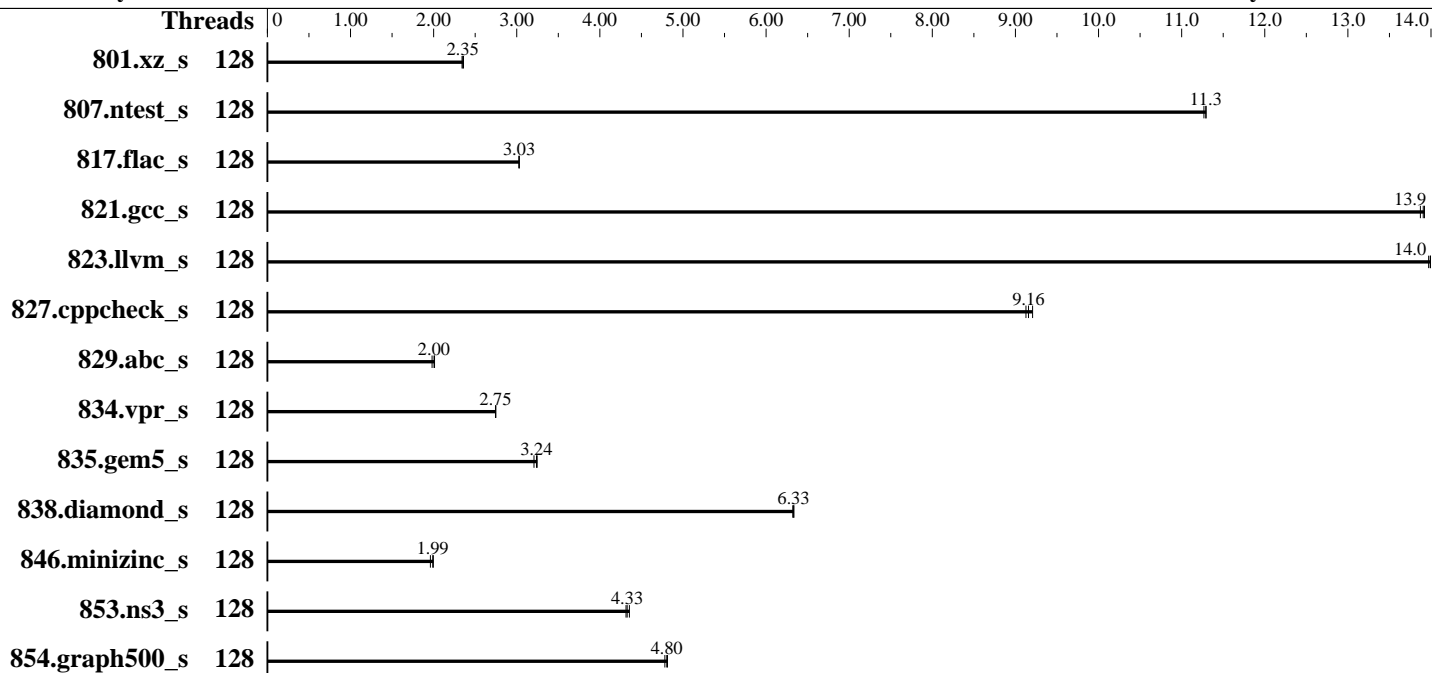
Test Sponsor: HPE

Tested by: HPE

Test Date: Feb-2026

Hardware Availability: Aug-2023

Software Availability: Jan-2026



Hardware

CPU Name: AMD EPYC 9754
 Max MHz: 3100
 Nominal: 2250
 Enabled: 128 cores, 1 chip
 Orderable: 1 Chip
 Cache L1: 32 KB I + 32 KB D on chip per core
 L2: 1 MB I+D on chip per core
 L3: 256 MB I+D on chip per chip,
 16 MB shared / 8 cores
 Other: None
 Memory: 768 GB (12 x 64 GB 2Rx4 PC5-4800B-R)
 Storage: 1 x 480 GB NVMe SSD
 Cooling: CLC
 Other: None

Software

OS: Ubuntu 24.04.3 LTS
 Kernel 6.8.0-90-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 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	128	252	2.34	250	2.36	<u>251</u>	<u>2.35</u>	128	252	2.34	250	2.36	<u>251</u>	<u>2.35</u>
807.nctest_s	128	<u>101</u>	<u>11.3</u>	101	11.3	101	11.3	128	<u>101</u>	<u>11.3</u>	101	11.3	101	11.3
817.flac_s	128	573	3.03	574	3.03	<u>573</u>	<u>3.03</u>	128	573	3.03	574	3.03	<u>573</u>	<u>3.03</u>
821.gcc_s	128	149	13.9	<u>149</u>	<u>13.9</u>	149	13.9	128	149	13.9	<u>149</u>	<u>13.9</u>	149	13.9
823.llvm_s	128	<u>101</u>	<u>14.0</u>	101	14.0	101	14.0	128	<u>101</u>	<u>14.0</u>	101	14.0	101	14.0
827.cppcheck_s	128	122	9.21	<u>122</u>	<u>9.16</u>	123	9.13	128	122	9.21	<u>122</u>	<u>9.16</u>	123	9.13
829.abc_s	128	419	1.98	413	2.01	<u>414</u>	<u>2.00</u>	128	419	1.98	413	2.01	<u>414</u>	<u>2.00</u>
834.vpr_s	128	<u>347</u>	<u>2.75</u>	348	2.74	347	2.75	128	<u>347</u>	<u>2.75</u>	348	2.74	347	2.75
835.gem5_s	128	351	3.25	355	3.21	<u>352</u>	<u>3.24</u>	128	351	3.25	355	3.21	<u>352</u>	<u>3.24</u>
838.diamond_s	128	158	6.32	<u>158</u>	<u>6.33</u>	158	6.33	128	158	6.32	<u>158</u>	<u>6.33</u>	158	6.33
846.minizinc_s	128	<u>337</u>	<u>1.99</u>	342	1.96	336	2.00	128	<u>337</u>	<u>1.99</u>	342	1.96	336	2.00
853.ns3_s	128	265	4.36	267	4.31	<u>266</u>	<u>4.33</u>	128	265	4.36	267	4.31	<u>266</u>	<u>4.33</u>
854.graph500_s	128	<u>127</u>	<u>4.80</u>	128	4.78	127	4.81	128	<u>127</u>	<u>4.80</u>	128	4.78	127	4.81

SPECspeed®2026_int_base = 4.77

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

Compiler Notes

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



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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 = "0-127"
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

AMD SMT Option set to Disabled

Determinism Control set to Manual

Performance Determinism set to Power Deterministic

Last-Level Cache (LLC) as NUMA Node set to Enabled

NUMA memory domains per socket set to Four memory domains per socket

Memory Patrol Scrubbing set to Disabled

ACPI CST C2 Latency set to 18 microseconds

Thermal Configuration set to Maximum Cooling

Sysinfo program /home/cpu2026/bin/sysinfo
 Rev: 069f95da7e7f5d81b2ce48a82150e54f

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Platform Notes (Continued)

running on admin1 Fri Feb 6 04:09:31 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
04:09:31 up 2 min, 3 users, load average: 0.08, 0.03, 0.00
USER      TTY      FROM          LOGIN@      IDLE        JCPU       PCPU       WHAT
admin1    pts/0    172.16.0.100  04:07      2:41       0.00s     0.01s     sshd: admin1 [priv]
admin1    pts/0    172.16.0.100  04:07      2:41       0.00s     0.01s     sshd: admin1 [priv]
admin1    pts/0    172.16.0.100  04:07      2:41       0.00s     0.02s     sshd: admin1 [priv]
```

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

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Platform Notes (Continued)

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                3094437
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 $$SPEC/tmp/CPU2026.002/templogs/preenv.intspeed.002.0.log --lognum 002.0 --from_runcpu 2
specperl $$SPEC/bin/sysinfo
$SPEC = /home/cpu2026

```

6. /proc/cpuinfo

```

model name      : AMD EPYC 9754 128-Core Processor
vendor_id      : AuthenticAMD
cpu family     : 25
model          : 160
stepping       : 1
microcode      : 0xaa00116
bugs           : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass srso vmscape
TLB size       : 3584 4K pages
cpu cores      : 128
siblings       : 128

```

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Platform Notes (Continued)

1 physical ids (chips)

128 processors (hardware threads)

physical id 0: core ids

0-7,16-23,32-39,48-55,64-71,80-87,96-103,112-119,128-135,144-151,160-167,176-183,192-199,208-215,224-231,240-247

physical id 0: apicids

0-7,16-23,32-39,48-55,64-71,80-87,96-103,112-119,128-135,144-151,160-167,176-183,192-199,208-215,224-231,240-247

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):                       128
On-line CPU(s) list:         0-127
Vendor ID:                   AuthenticAMD
BIOS Vendor ID:              Advanced Micro Devices, Inc.
Model name:                   AMD EPYC 9754 128-Core Processor
BIOS Model name:              AMD EPYC 9754 128-Core Processor          CPU @ 2.2GHz
BIOS CPU family:              107
CPU family:                   25
Model:                        160
Thread(s) per core:           1
Core(s) per socket:           128
Socket(s):                    1
Stepping:                     1
BogoMIPS:                     4493.33
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 aperfmpperf 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 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 avx512_bf16 clzero irperf xsaveerptr rdpru wbnoinvd
                               amd_ppin cppc amd_ibpb_ret arat npt lbrv svm_lock nrip_save tsc_scale

```

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Platform Notes (Continued)

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_vpoptndq la57 rdpid overflow_recov succor smca fsrm flush_lld
debug_swap ibpb_exit_to_user

Virtualization: AMD-V

L1d cache: 4 MiB (128 instances)

L1i cache: 4 MiB (128 instances)

L2 cache: 128 MiB (128 instances)

L3 cache: 256 MiB (16 instances)

NUMA node(s): 16

NUMA node0 CPU(s): 0-7

NUMA node1 CPU(s): 8-15

NUMA node2 CPU(s): 16-23

NUMA node3 CPU(s): 24-31

NUMA node4 CPU(s): 32-39

NUMA node5 CPU(s): 40-47

NUMA node6 CPU(s): 48-55

NUMA node7 CPU(s): 56-63

NUMA node8 CPU(s): 64-71

NUMA node9 CPU(s): 72-79

NUMA node10 CPU(s): 80-87

NUMA node11 CPU(s): 88-95

NUMA node12 CPU(s): 96-103

NUMA node13 CPU(s): 104-111

NUMA node14 CPU(s): 112-119

NUMA node15 CPU(s): 120-127

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: Mitigation; Safe RET

Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl

Vulnerability Spectre v1: Mitigation; usercopy/swaps barriers and __user pointer sanitization

Vulnerability Spectre v2: Mitigation; Enhanced / Automatic IBRS; IBPB conditional; STIBP disabled; RSB filling; PBRSE-eIBRS Not affected; BHI Not affected

Vulnerability Srbds: Not affected

Vulnerability Tsx async abort: Not affected

Vulnerability Vmscape: Mitigation; IBPB before exit to userspace

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	32K	4M	8	Data	1	64	1	64

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Platform Notes (Continued)

L1i	32K	4M	8 Instruction	1	64	1	64
L2	1M	128M	8 Unified	2	2048	1	64
L3	16M	256M	16 Unified	3	16384	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
node 0 size: 48066 MB
node 0 free: 47267 MB
node 1 cpus: 8-15
node 1 size: 48337 MB
node 1 free: 48193 MB
node 2 cpus: 16-23
node 2 size: 48381 MB
node 2 free: 48268 MB
node 3 cpus: 24-31
node 3 size: 48381 MB
node 3 free: 48281 MB
node 4 cpus: 32-39
node 4 size: 48381 MB
node 4 free: 48273 MB
node 5 cpus: 40-47
node 5 size: 48381 MB
node 5 free: 48256 MB
node 6 cpus: 48-55
node 6 size: 48381 MB
node 6 free: 48273 MB
node 7 cpus: 56-63
node 7 size: 48381 MB
node 7 free: 48208 MB
node 8 cpus: 64-71
node 8 size: 48381 MB
node 8 free: 48265 MB
node 9 cpus: 72-79
node 9 size: 48381 MB
node 9 free: 48295 MB
node 10 cpus: 80-87
node 10 size: 48381 MB
node 10 free: 48270 MB
node 11 cpus: 88-95
node 11 size: 48381 MB
node 11 free: 48276 MB
node 12 cpus: 96-103
node 12 size: 48381 MB
node 12 free: 48182 MB

```

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Platform Notes (Continued)

```

node 13 cpus: 104-111
node 13 size: 48381 MB
node 13 free: 48269 MB
node 14 cpus: 112-119
node 14 size: 48381 MB
node 14 free: 48267 MB
node 15 cpus: 120-127
node 15 size: 48330 MB
node 15 free: 48012 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:          792257772 kB

```

```

-----
10. who -r
    run-level 5 Feb 6 04:06

```

```

-----
11. Systemd service manager version: systemd 255 (255.4-lubuntu8.12)
    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

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Platform Notes (Continued)

```

networkd-dispatcher open-iscsi open-vm-tools pollinate rsyslog secureboot-db setvtrgb
snaped 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 uuid
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=c8895b10-3344-47fb-81a4-2b6fb85bbd20
ro

```

14. cpupower frequency-info

```

analyzing CPU 98:
Unable to determine current policy
boost state support:
Supported: yes
Active: yes
Boost States: 0
Total States: 3
Pstate-P0: 2250MHz

```

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

```

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CPU2026 License: 3

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Test Date: Feb-2026

Hardware Availability: Aug-2023

Software Availability: Jan-2026

Platform Notes (Continued)

```

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
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/nvme0n1p2 ext4  438G  93G  324G  23% /

```

```

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

```

```

-----
22. dmidecode

```

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Platform Notes (Continued)

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:

3x Hynix HMCG94AEBRA103N 64 GB 2 rank 4800
1x Hynix HMCG94AEBRA123N 64 GB 2 rank 4800
8x Hynix HMCG94MEBRA121N 64 GB 2 rank 4800

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

=====
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

(Continued on next page)



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Test Sponsor: HPE

Tested by: HPE

Test Date: Feb-2026

Hardware Availability: Aug-2023

Software Availability: Jan-2026

Compiler Version Notes (Continued)

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
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 -fltto
-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

```

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Base Optimization Flags (Continued)

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
```

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
```

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Peak Optimization Flags (Continued)

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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