



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2017\_int\_base = 21.0

PowerEdge R7725 (AMD EPYC 9575F 64-Core Processor)

SPECspeed®2017\_int\_peak = 21.4

CPU2017 License: 6573

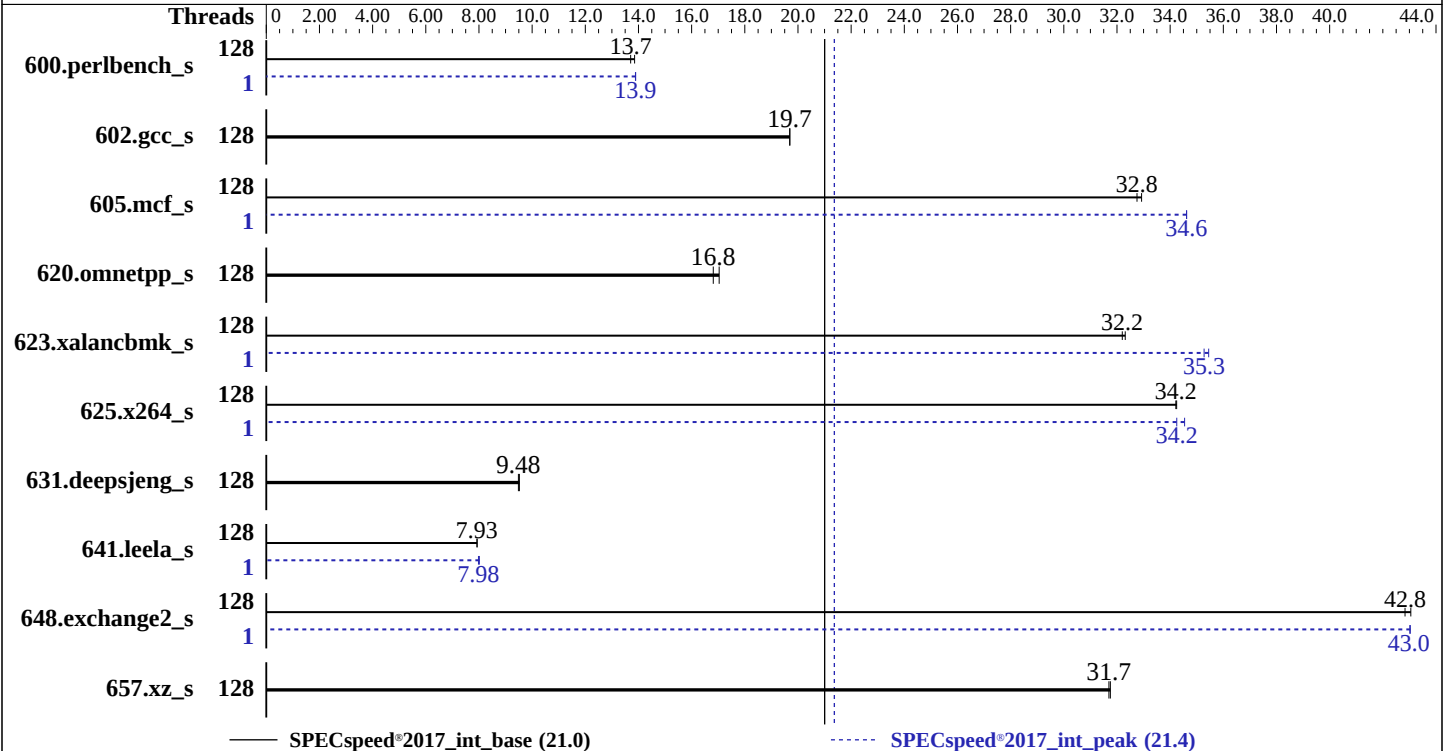
Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Nov-2025

Hardware Availability: Nov-2025

Software Availability: Jun-2025



## Hardware

CPU Name: AMD EPYC 9575F  
Max MHz: 5000  
Nominal: 3300  
Enabled: 128 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: 256 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)  
Storage: 130 GB on tmpfs  
Other: CPU Cooling: Air

## Software

OS: Ubuntu 24.04.2 LTS  
6.8.0-62-generic  
Compiler: C/C++/Fortran: Version 5.0.0 of AOCC  
Parallel: Yes  
Firmware: Version 1.4.1 released Aug-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 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 |
| 600.perlbench_s | 128     | <b><u>129</u></b>  | <b><u>13.7</u></b> | 128                | 13.9               |         |       | 1       | <b><u>128</u></b>  | <b><u>13.9</u></b> | 128                | 13.9               |         |       |
| 602.gcc_s       | 128     | 202                | 19.7               | <b><u>202</u></b>  | <b><u>19.7</u></b> |         |       | 128     | 202                | 19.7               | <b><u>202</u></b>  | <b><u>19.7</u></b> |         |       |
| 605.mcf_s       | 128     | <b><u>144</u></b>  | <b><u>32.8</u></b> | 143                | 32.9               |         |       | 1       | 136                | 34.6               | <b><u>136</u></b>  | <b><u>34.6</u></b> |         |       |
| 620.omnetpp_s   | 128     | 95.7               | 17.0               | <b><u>97.0</u></b> | <b><u>16.8</u></b> |         |       | 128     | 95.7               | 17.0               | <b><u>97.0</u></b> | <b><u>16.8</u></b> |         |       |
| 623.xalancbmk_s | 128     | 43.9               | 32.3               | <b><u>44.0</u></b> | <b><u>32.2</u></b> |         |       | 1       | <b><u>40.2</u></b> | <b><u>35.3</u></b> | 40.0               | 35.4               |         |       |
| 625.x264_s      | 128     | <b><u>51.6</u></b> | <b><u>34.2</u></b> | 51.5               | 34.2               |         |       | 1       | 51.1               | 34.5               | <b><u>51.5</u></b> | <b><u>34.2</u></b> |         |       |
| 631.deepsjeng_s | 128     | 151                | 9.52               | <b><u>151</u></b>  | <b><u>9.48</u></b> |         |       | 128     | 151                | 9.52               | <b><u>151</u></b>  | <b><u>9.48</u></b> |         |       |
| 641.leela_s     | 128     | 215                | 7.93               | <b><u>215</u></b>  | <b><u>7.93</u></b> |         |       | 1       | 213                | 8.02               | <b><u>214</u></b>  | <b><u>7.98</u></b> |         |       |
| 648.exchange2_s | 128     | 68.3               | 43.1               | <b><u>68.6</u></b> | <b><u>42.8</u></b> |         |       | 1       | <b><u>68.3</u></b> | <b><u>43.0</u></b> | 68.3               | 43.0               |         |       |
| 657.xz_s        | 128     | 195                | 31.8               | <b><u>195</u></b>  | <b><u>31.7</u></b> |         |       | 128     | 195                | 31.8               | <b><u>195</u></b>  | <b><u>31.7</u></b> |         |       |

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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/>

## 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.



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## Environment Variables Notes

Environment variables set by runcpu before the start of the run:

GOMP\_CPU\_AFFINITY = "0-255"

LD\_LIBRARY\_PATH =

"/mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5\_A1.4/amd\_speed\_aocc500\_znver5\_A\_lib/lib:/mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5\_A1.4/amd\_speed\_aocc500\_znver5\_A\_lib/lib32:"

LIBOMP\_NUM\_HIDDEN\_HELPER\_THREADS = "0"

MALLOC\_CONF = "retain:true"

OMP\_DYNAMIC = "false"

OMP\_SCHEDULE = "static"

OMP\_STACKSIZE = "128M"

OMP\_THREAD\_LIMIT = "256"

Environment variables set by runcpu during the 600.perlbench\_s peak run:

GOMP\_CPU\_AFFINITY = "15"

Environment variables set by runcpu during the 605.mcf\_s peak run:

GOMP\_CPU\_AFFINITY = "15"

Environment variables set by runcpu during the 623.xalancbmk\_s peak run:

GOMP\_CPU\_AFFINITY = "15"

Environment variables set by runcpu during the 625.x264\_s peak run:

GOMP\_CPU\_AFFINITY = "15"

Environment variables set by runcpu during the 641.leela\_s peak run:

GOMP\_CPU\_AFFINITY = "15"

Environment variables set by runcpu during the 648.exchange2\_s peak run:

GOMP\_CPU\_AFFINITY = "15"

## General Notes

Binaries were compiled on a system with 2x AMD EPYC 9D64 CPU + 500GiB Memory using Ubuntu 22.04

Benchmark run from a 130 GB ramdisk created with the cmd: "mount -t tmpfs -o size=130G tmpfs /mnt/ramdisk"

## Platform Notes

BIOS Settings:

Virtualization Technology : Disabled

NUMA Nodes Per Socket : 4

System Profile : Custom

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

Algorithm Performance Boost Disable : Enabled

Adaptive Allocation : Enabled

Dram Refresh Delay : Performance

DIMM Self Healing -

on Uncorrectable Memory Error : Disabled

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## Platform Notes (Continued)

Sysinfo program /mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5\_A1.4/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on SLR7726-R7725 Tue Nov 4 09:02:25 2025

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

### Table of contents

1. uname -a
  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. 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. 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 -a  
Linux SLR7726-R7725 6.8.0-62-generic #65-Ubuntu SMP PREEMPT\_DYNAMIC Mon May 19 17:15:03 UTC 2025 x86\_64  
x86\_64 x86\_64 GNU/Linux
- 
2. w  
09:02:25 up 3 min, 1 user, load average: 0.26, 0.09, 0.03  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT  
root tty1 - 08:59 49.00s 1.24s 0.34s /bin/bash ./amd\_speed\_aocc500\_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 6189188  
nofiles 1024

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## Platform Notes (Continued)

vmemory(kbytes) unlimited  
locks unlimited  
rtprio 0

```
-----
5. sysinfo process ancestry
/bin/init splash
/bin/login -p --
-bash
/bin/bash /home/DellFiles/bin/DELL_speed.sh
/bin/bash /home/DellFiles/bin/dell-run-main.sh speed
/bin/bash /home/DellFiles/bin/dell-run-main.sh speed
/bin/bash /home/DellFiles/bin/AMD/dell-run-speccpu.sh speed --define DL-VERS=6.3b --output_format
html, pdf, txt
python3 ./run_amd_speed_aocc500_znver5_A1.py
/bin/bash ./amd_speed_aocc500_znver5_A1.sh
runcpu --config amd_speed_aocc500_znver5_A1.cfg --tune all --reportable --iterations 2 --define DL-VERS=6.3b
--output_format html, pdf, txt intspeed
runcpu --configfile amd_speed_aocc500_znver5_A1.cfg --tune all --reportable --iterations 2 --define
DL-VERS=6.3b --output_format html, pdf, txt --nopower --runmode speed --tune base:peak --size
test:train:refspeed intspeed --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.001/temlogs/preenv.intspeed.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5_A1.4
-----
```

```
6. /proc/cpuinfo
model name      : AMD EPYC 9575F 64-Core Processor
vendor_id      : AuthenticAMD
cpu family     : 26
model          : 2
stepping       : 1
microcode      : 0xb002152
bugs           : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
TLB size      : 192 4K pages
cpu cores      : 64
siblings       : 128
2 physical ids (chips)
256 processors (hardware threads)
physical id 0: core ids 0-63
physical id 1: core ids 0-63
physical id 0: apicids 0-127
physical id 1: apicids 128-255
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:      | AMD                               |
| Model name:          | AMD EPYC 9575F 64-Core Processor  |
| BIOS Model name:     | AMD EPYC 9575F 64-Core Processor  |

CPU @ 3.3GHz

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## Platform Notes (Continued)

BIOS CPU family: 107  
CPU family: 26  
Model: 2  
Thread(s) per core: 2  
Core(s) per socket: 64  
Socket(s): 2  
Stepping: 1  
Frequency boost: enabled  
CPU(s) scaling MHz: 27%  
CPU max MHz: 5008.0000  
CPU min MHz: 1200.0000  
BogoMIPS: 6591.04  
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 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 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\_lld debug\_swap  
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): 8  
NUMA node0 CPU(s): 0-15,128-143  
NUMA node1 CPU(s): 16-31,144-159  
NUMA node2 CPU(s): 32-47,160-175  
NUMA node3 CPU(s): 48-63,176-191  
NUMA node4 CPU(s): 64-79,192-207  
NUMA node5 CPU(s): 80-95,208-223  
NUMA node6 CPU(s): 96-111,224-239  
NUMA node7 CPU(s): 112-127,240-255  
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  
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; PBRSE-IBRS Not affected; BHI Not affected  
Vulnerability Srbds: Not affected  
Vulnerability Tsx async abort: Not affected

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## Platform Notes (Continued)

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: 8 nodes (0-7)

node 0 cpus: 0-15,128-143

node 0 size: 192813 MB

node 0 free: 191980 MB

node 1 cpus: 16-31,144-159

node 1 size: 193479 MB

node 1 free: 193019 MB

node 2 cpus: 32-47,160-175

node 2 size: 193522 MB

node 2 free: 193145 MB

node 3 cpus: 48-63,176-191

node 3 size: 193506 MB

node 3 free: 193066 MB

node 4 cpus: 64-79,192-207

node 4 size: 193522 MB

node 4 free: 193150 MB

node 5 cpus: 80-95,208-223

node 5 size: 193522 MB

node 5 free: 188107 MB

node 6 cpus: 96-111,224-239

node 6 size: 193522 MB

node 6 free: 193151 MB

node 7 cpus: 112-127,240-255

node 7 size: 193483 MB

node 7 free: 193063 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: 1584511812 kB

10. who -r

run-level 5 Nov 4 08:59

11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.8)

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
* pwrctrl.service loaded failed failed Power 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 appport avahi-daemon 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 pwrctrl secureboot-db setvtrgb ssh
systemd-networkd systemd-networkd-wait-online systemd-pstore systemd-resolved
systemd-timesyncd thermald udisks2 ufw wpa_supplicant
enabled-runtime netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs
disabled    console-getty debug-shell ipmiev d iscsid nftables powertop rtkit-daemon serial-getty@
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-sysex
systemd-time-wait-sync upower wpa_supplicant-nl80211@ wpa_supplicant-wired@
wpa_supplicant@
generated   cpufrequtils loadcpufreq openipmi
indirect    systemd-sysupdate systemd-sysupdate-reboot
masked      cryptdisks cryptdisks-early hwclock multipath-tools-boot screen-cleanup sudo x11-common
```

### 14. Linux kernel boot-time arguments, from /proc/cmdline

```
BOOT_IMAGE=/boot/vmlinuz-6.8.0-62-generic
root=UUID=24c22b24-b79c-4fae-9365-376646cd2341
ro
quiet
splash
amd_pstate=passive
vt.handoff=7
```

### 15. cpupower frequency-info

```
analyzing CPU 108:
  current policy: frequency should be within 1.20 GHz and 5.01 GHz.
                  The governor "ondemand" may decide which speed to use
                  within this range.
  boost state support:
    Supported: yes
    Active: yes
```

### 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
```

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# SPEC CPU®2017 Integer Speed Result

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Dell Inc.

SPECspeed®2017\_int\_base = 21.0

SPECspeed®2017\_int\_peak = 21.4

PowerEdge R7725 (AMD EPYC 9575F 64-Core Processor)

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Nov-2025

Hardware Availability: Nov-2025

Software Availability: Jun-2025

## Platform Notes (Continued)

```
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+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 24.04.2 LTS
-----
```

```
-----
20. Disk information
SPEC is set to: /mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5_A1.4
Filesystem      Type  Size  Used Avail Use% Mounted on
tmpfs           tmpfs 130G  3.3G 127G   3% /mnt/ramdisk
-----
```

```
-----
21. /sys/devices/virtual/dmi/id
Vendor:      Dell Inc.
Product:     PowerEdge R7725
Product Family: PowerEdge
Serial:      SLR7726
-----
```

```
-----
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:
 19x 80AD000080AD HMC94AHBRA277N 64 GB 2 rank 6400
  4x 80AD000080AD HMC94AHBRA480N 64 GB 2 rank 6400
  1x 80CE000080CE M321R8GA0PB1-CCPQC 64 GB 2 rank 6400
-----
```

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## Platform Notes (Continued)

### 23. BIOS

(This section combines info from /sys/devices and dmidecode.)

BIOS Vendor: Dell Inc.

BIOS Version: 1.4.1

BIOS Date: 08/13/2025

BIOS Revision: 1.4

## Compiler Version Notes

```
=====
C      | 600.perlbench_s(base, peak) 602.gcc_s(base, peak) 605.mcf_s(base, peak) 625.x264_s(base, peak)
      | 657.xz_s(base, peak)
-----
```

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1377 2024\_09\_24)

Target: x86\_64-unknown-linux-gnu

Thread model: posix

InstalledDir: /opt/AMD/aocc/aocc-compiler-5.0.0/bin

```
=====
C++    | 620.omnetpp_s(base, peak) 623.xalancbmk_s(base, peak) 631.deepsjeng_s(base, peak)
      | 641.leela_s(base, peak)
-----
```

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1377 2024\_09\_24)

Target: x86\_64-unknown-linux-gnu

Thread model: posix

InstalledDir: /opt/AMD/aocc/aocc-compiler-5.0.0/bin

```
=====
Fortran | 648.exchange2_s(base, peak)
-----
```

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1377 2024\_09\_24)

Target: x86\_64-unknown-linux-gnu

Thread model: posix

InstalledDir: /opt/AMD/aocc/aocc-compiler-5.0.0/bin

## Base Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

Fortran benchmarks:

flang



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Test Date: Nov-2025

Hardware Availability: Nov-2025

Software Availability: Jun-2025

## Base Portability Flags

600.perlbench\_s: -DSPEC\_LINUX\_X64 -DSPEC\_LP64  
602.gcc\_s: -DSPEC\_LP64  
605.mcf\_s: -DSPEC\_LP64  
620.omnetpp\_s: -DSPEC\_LP64  
623.xalancbmk\_s: -DSPEC\_LINUX -DSPEC\_LP64  
625.x264\_s: -DSPEC\_LP64  
631.deepsjeng\_s: -DSPEC\_LP64  
641.leela\_s: -DSPEC\_LP64  
648.exchange2\_s: -DSPEC\_LP64  
657.xz\_s: -DSPEC\_LP64

## Base Optimization Flags

C benchmarks:

-m64 -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  
-march=znver5 -fveclib=AMDLIBM -ffast-math -fopenmp -DSPEC\_OPENMP  
-flto -fremap-arrays -fstrip-mining -fstruct-layout=7  
-mllvm -inline-threshold=1000 -mllvm -reduce-array-computations=3  
-mllvm -unroll-threshold=50 -zopt -fopenmp=libomp -lomp -lamdlibm  
-lflang -lamdalloc

C++ benchmarks:

-m64 -std=c++14 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver5  
-fveclib=AMDLIBM -ffast-math -fopenmp -DSPEC\_OPENMP -flto  
-mllvm -loop-unswitch-threshold=200000  
-mllvm -reduce-array-computations=3 -mllvm -unroll-threshold=100 -zopt  
-fvirtual-function-elimination -fvisibility=hidden -fopenmp=libomp  
-lomp -lamdlibm -lflang -lamdalloc-ext

Fortran benchmarks:

-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3  
-Wl,-mllvm -Wl,-enable-iv-split -Wl,-mllvm -Wl,-inline-recursion=4  
-Wl,-mllvm -Wl,-lsr-in-nested-loop -O3 -march=znver5 -fveclib=AMDLIBM  
-ffast-math -fopenmp -flto -mllvm -optimize-strided-mem-cost  
-mllvm -unroll-aggressive -mllvm -unroll-threshold=150 -fopenmp=libomp  
-lomp -lamdlibm -lflang -lamdalloc



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Hardware Availability: Nov-2025

Software Availability: Jun-2025

## Base Other Flags

C benchmarks:

-Wno-return-type -Wno-unused-command-line-argument

C++ benchmarks:

-Wno-unused-command-line-argument

Fortran benchmarks:

-Wno-unused-command-line-argument

## Peak Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

Fortran benchmarks:

flang

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

```
600.perlbench_s: -m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-allow-multiple-definition
-Wl,-mllvm -Wl,-extra-inliner -Ofast -march=znver5
-fveclib=AMDLIBM -ffast-math -fopenmp -flto
-DSPEC_OPENMP -fremap-arrays -fstrip-mining
-fstruct-layout=9 -mllvm -inline-threshold=1000
-mllvm -reduce-array-computations=3
-mllvm -unroll-threshold=50 -zopt -fopenmp=libomp -lomp
-lamdlibm -lamdalloc -lflang
```

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Tested by: Dell Inc.

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Hardware Availability: Nov-2025

Software Availability: Jun-2025

## Peak Optimization Flags (Continued)

602.gcc\_s: basepeak = yes

605.mcf\_s: -m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3  
-Wl,-mllvm -Wl,-extra-inliner -Ofast -march=znver5  
-fveclib=AMDLIBM -ffast-math -fopenmp -flto  
-DSPEC\_OPENMP -fremap-arrays -fstrip-mining  
-fstruct-layout=9 -mllvm -inline-threshold=1000  
-mllvm -reduce-array-computations=3  
-mllvm -unroll-threshold=50 -zopt -fopenmp=libomp -lomp  
-lamdlibm -lamdalloc -lflang

625.x264\_s: Same as 600.perlbench\_s

657.xz\_s: basepeak = yes

C++ benchmarks:

620.omnetpp\_s: basepeak = yes

623.xalancbmk\_s: -m64 -std=c++14  
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3  
-Wl,-mllvm -Wl,-do-block-reorder=advanced -Ofast  
-march=znver5 -fveclib=AMDLIBM -ffast-math -fopenmp  
-flto -DSPEC\_OPENMP -mllvm -reduce-array-computations=3  
-mllvm -unroll-threshold=100 -zopt  
-fvirtual-function-elimination -fvisibility=hidden  
-mllvm -do-block-reorder=advanced -fopenmp=libomp -lomp  
-lamdlibm -lamdalloc-ext -lflang

631.deepsjeng\_s: basepeak = yes

641.leela\_s: -m64 -std=c++14  
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast  
-march=znver5 -fveclib=AMDLIBM -ffast-math -fopenmp  
-flto -DSPEC\_OPENMP -mllvm -reduce-array-computations=3  
-mllvm -unroll-threshold=100 -zopt  
-fvirtual-function-elimination -fvisibility=hidden  
-fopenmp=libomp -lomp -lamdlibm -lamdalloc -lflang

Fortran benchmarks:

-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3  
-Wl,-mllvm -Wl,-enable-iv-split -Wl,-mllvm -Wl,-inline-recursion=4

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## Peak Optimization Flags (Continued)

Fortran benchmarks (continued):

-Wl, -mllvm -Wl, -lsr-in-nested-loop -O3 -march=znver5 -fveclib=AMDLIBM  
-ffast-math -fopenmp -flto -mllvm -optimize-strided-mem-cost  
-mllvm -unroll-aggressive -mllvm -unroll-threshold=150 -fopenmp=libomp  
-lomp -lamdlibm -lamdalloc -lflang

## Peak Other Flags

C benchmarks:

-Wno-return-type -Wno-unused-command-line-argument

C++ benchmarks:

-Wno-unused-command-line-argument

Fortran benchmarks:

-Wno-unused-command-line-argument

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/aocc500-flags.2024-10-10.html>

<http://www.spec.org/cpu2017/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/cpu2017/flags/aocc500-flags.2024-10-10.xml>

<http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-AMD-EPYC-v1.8.xml>

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