



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_fp\_base = 2330

SPECrate®2017\_fp\_peak = 2400

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

CPU2017 License: 6573

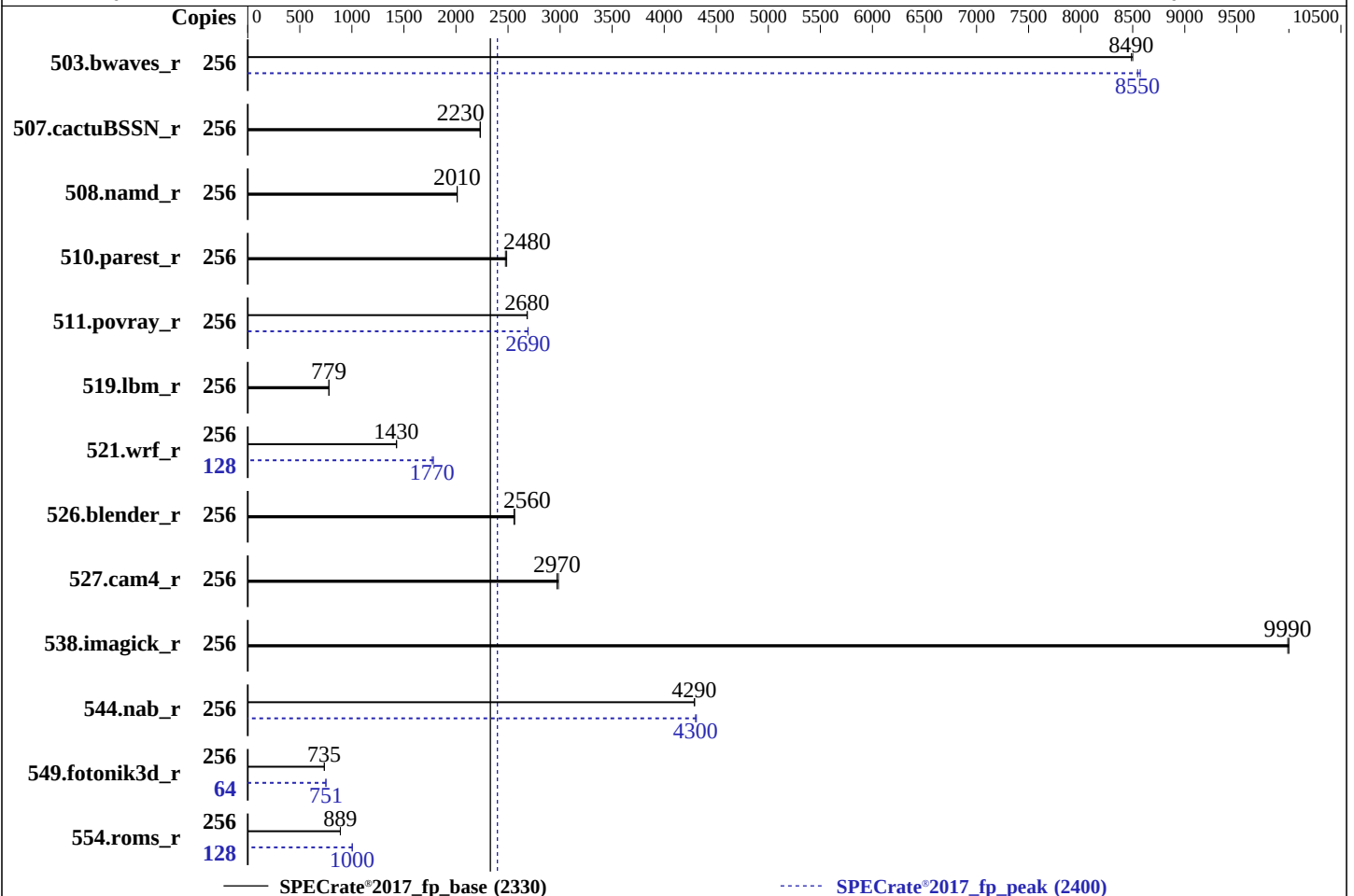
Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025



## Hardware

CPU Name: AMD EPYC 9755  
Max MHz: 4100  
Nominal: 2700  
Enabled: 256 cores, 2 chips  
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)  
Storage: 130 GB on tmpfs  
Other: CPU Cooling: DLC

## Software

OS: Ubuntu 24.04.2 LTS  
6.8.0-54-generic  
Compiler: C/C++/Fortran: Version 5.0.0 of AOCC  
Parallel: No  
Firmware: Version 1.0.0 released Jan-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 |
| 503.bwaves_r    | 256    | 302        | 8500        | <u>302</u>  | <u>8490</u> |         |       | 256    | 299        | 8570        | <u>300</u>  | <u>8550</u> |         |       |
| 507.cactuBSSN_r | 256    | 145        | 2240        | <u>145</u>  | <u>2230</u> |         |       | 256    | 145        | 2240        | <u>145</u>  | <u>2230</u> |         |       |
| 508.namd_r      | 256    | 121        | 2010        | <u>121</u>  | <u>2010</u> |         |       | 256    | 121        | 2010        | <u>121</u>  | <u>2010</u> |         |       |
| 510.parest_r    | 256    | <u>271</u> | <u>2480</u> | 269         | 2490        |         |       | 256    | <u>271</u> | <u>2480</u> | 269         | 2490        |         |       |
| 511.povray_r    | 256    | <u>223</u> | <u>2680</u> | 223         | 2690        |         |       | 256    | <u>222</u> | <u>2690</u> | 222         | 2690        |         |       |
| 519.lbm_r       | 256    | <u>346</u> | <u>779</u>  | 346         | 780         |         |       | 256    | <u>346</u> | <u>779</u>  | 346         | 780         |         |       |
| 521.wrf_r       | 256    | 401        | 1430        | <u>402</u>  | <u>1430</u> |         |       | 128    | 161        | 1780        | <u>162</u>  | <u>1770</u> |         |       |
| 526.blender_r   | 256    | <u>153</u> | <u>2560</u> | 152         | 2560        |         |       | 256    | <u>153</u> | <u>2560</u> | 152         | 2560        |         |       |
| 527.cam4_r      | 256    | <u>151</u> | <u>2970</u> | 150         | 2980        |         |       | 256    | <u>151</u> | <u>2970</u> | 150         | 2980        |         |       |
| 538.imagick_r   | 256    | 63.7       | 10000       | <u>63.7</u> | <u>9990</u> |         |       | 256    | 63.7       | 10000       | <u>63.7</u> | <u>9990</u> |         |       |
| 544.nab_r       | 256    | 100        | 4290        | <u>100</u>  | <u>4290</u> |         |       | 256    | <u>100</u> | <u>4300</u> | 100         | 4310        |         |       |
| 549.fotonik3d_r | 256    | 1356       | 736         | <u>1357</u> | <u>735</u>  |         |       | 64     | <u>332</u> | <u>751</u>  | 332         | 751         |         |       |
| 554.roms_r      | 256    | <u>458</u> | <u>889</u>  | 457         | 890         |         |       | 128    | 202        | 1000        | <u>203</u>  | <u>1000</u> |         |       |

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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

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## Operating System Notes (Continued)

'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/cpu2017-1.1.9-aocc500-znerv5\_A1/amd\_rate\_aocc500\_znver5\_A\_lib/lib:/mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5\_A1/amd\_rate\_aocc500\_znver5\_A\_lib/lib32:"

MALLOC\_CONF = "retain:true"

## General Notes

Binaries were compiled on a system with 2x AMD EPYC 9174F CPU + 1.5TiB Memory using RHEL 8.6

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.

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

## Platform Notes

BIOS Settings:

Logical Processor : Disabled  
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  
DF CState : Disabled  
CPPC : Disabled  
Adaptive Allocation : Enabled  
Dram Refresh Delay : Performance  
Correctable Memory ECC SMI : Disabled  
DIMM Self Healing -  
on Uncorrectable Memory Error : Disabled

Sysinfo program /mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5\_A1/bin/sysinfo  
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
running on L302624-M7725 Wed Mar 5 22:46:07 2025

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

(Continued on next page)



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## Platform Notes (Continued)

### 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 (255.4-1ubuntu8.5)
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 -a
Linux L302624-M7725 6.8.0-54-generic #56-Ubuntu SMP PREEMPT_DYNAMIC Sat Feb  8 00:37:57 UTC 2025 x86_64
x86_64 x86_64 GNU/Linux
```

```
2. w
22:46:07 up 7 min,  1 user,   load average: 0.16, 0.04, 0.01
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU   WHAT
root      tty1      -               22:43    47.00s 1.26s  0.37s /bin/bash ./amd_rate_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            6188977
nofiles            1024
vmemory(kbytes)    unlimited
locks              unlimited
rtprio             0
```

```
5. sysinfo process ancestry
```

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## Platform Notes (Continued)

```
/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=6.1a --output_format
html,pdf,txt
python3 ./run_amd_rate_aocc500_znver5_A1.py
/bin/bash ./amd_rate_aocc500_znver5_A1.sh
runcpu --config amd_rate_aocc500_znver5_A1.cfg --tune all --reportable --iterations 2 --define DL-BIOS-NPS=4
--define DL-VERS=6.1a --output_format html,pdf,txt fprate
runcpu --configfile amd_rate_aocc500_znver5_A1.cfg --tune all --reportable --iterations 2 --define
DL-BIOS-NPS=4 --define DL-VERS=6.1a --output_format html,pdf,txt --nopower --runmode rate --tune base:peak
--size test:train:refrate fprate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.001/temlogs/preenv.fprate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5_A1
```

```
6. /proc/cpuinfo
model name      : AMD EPYC 9755 128-Core Processor
vendor_id      : AuthenticAMD
cpu family     : 26
model          : 2
stepping       : 1
microcode      : 0xb00211e
bugs           : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
TLB size       : 192 4K pages
cpu cores      : 128
siblings       : 128
2 physical ids (chips)
256 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 1: 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
physical id 1: apicids
256-263,272-279,288-295,304-311,320-327,336-343,352-359,368-375,384-391,400-407,416-423,432-439,448-455,4
64-471,480-487,496-503
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                               |

(Continued on next page)



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## Platform Notes (Continued)

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 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:                   | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |
| Core(s) per socket:                   | 128                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |
| Socket(s):                            | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |
| Stepping:                             | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |
| Frequency boost:                      | enabled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
| CPU(s) scaling MHz:                   | 101%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |
| CPU max MHz:                          | 2700.0000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |
| CPU min MHz:                          | 1500.0000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |
| BogoMIPS:                             | 5391.48                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
| Flags:                                | fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat<br>pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr_opt pdpe1gb<br>rdtscp lm constant_tsc rep_good amd_lbr_v2 nopl nonstop_tsc cpuid<br>extd_apicid aperfmperf rapl pni pclmulqdq monitor ssse3 fma cx16 pcid<br>sse4_1 sse4_2 x2apic movbe popcnt aes xsave avx f16c rdrand lahf_lm<br>cmp_legacy extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch<br>osvw ibs skinit wdt tce topoext perfctr_core perfctr_nb bpe<br>perfctr_llc mwaitx cpb cat_l3 cdp_l3 hw_pstate ssbd mba perfmon_v2<br>ibrs ibpb stibp ibrs_enhanced vmmcall fsgsbase tsc_adjust bmi1 avx2<br>smep bmi2 invpcid cqm rdt_a avx512f avx512dq rdseed adx smap<br>avx512ifma clflushopt clwb avx512cd sha_ni avx512bw avx512vl xsaveopt<br>xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total<br>cqm_mbm_local user_shstk avx_vnni avx512_bf16 clzero irperf<br>xsaveerptr rdpru wbnoinvd amd_ppin cpgc arat npt lbrv svm_lock<br>nrip_save tsc_scale vmcb_clean flushbyasid decodeassists pausefilter<br>pfthreshold avic v_vmsave_vmload vgif x2avic v_spec_ctrl vnmi<br>avx512vbmi umip pku ospke avx512_vbmi2 gfni vaes vpclmulqdq<br>avx512_vnni avx512_bitalg avx512_vpopcntdq la57 rdpid bus_lock_detect<br>movdiri movdir64b overflow_recov succor smca avx512_vp2intersect<br>flush_l1d debug_swap |              |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |
| NUMA node1 CPU(s):                    | 32-63                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| NUMA node2 CPU(s):                    | 64-95                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| NUMA node3 CPU(s):                    | 96-127                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |
| NUMA node4 CPU(s):                    | 128-159                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
| NUMA node5 CPU(s):                    | 160-191                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
| NUMA node6 CPU(s):                    | 192-223                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
| NUMA node7 CPU(s):                    | 224-255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
| 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/swaps barriers and __user pointer sanitization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |
| Vulnerability Spectre v2:             | Mitigation; Enhanced / Automatic IBRS; IBPB conditional; STIBP disabled; RSB filling; PBRB-eIBRS Not affected; BHI Not affected                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

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Dell Inc.

SPECrate®2017\_fp\_base = 2330

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

SPECrate®2017\_fp\_peak = 2400

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Platform Notes (Continued)

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      | 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

node 0 size: 192771 MB

node 0 free: 191574 MB

node 1 cpus: 32-63

node 1 size: 193520 MB

node 1 free: 193072 MB

node 2 cpus: 64-95

node 2 size: 193520 MB

node 2 free: 193089 MB

node 3 cpus: 96-127

node 3 size: 193504 MB

node 3 free: 193060 MB

node 4 cpus: 128-159

node 4 size: 193520 MB

node 4 free: 193064 MB

node 5 cpus: 160-191

node 5 size: 193520 MB

node 5 free: 193072 MB

node 6 cpus: 192-223

node 6 size: 193520 MB

node 6 free: 192913 MB

node 7 cpus: 224-255

node 7 size: 193437 MB

node 7 free: 189111 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: 1584454460 kB

10. who -r

run-level 5 Mar 5 22:38

11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.5)

Default Target Status

(Continued on next page)





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## Platform Notes (Continued)

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 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 uuuid                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| masked          | cryptdisks cryptdisks-early hwclock multipath-tools-boot screen-cleanup sudo x11-common                                                                                                                                                                                                                                                                                                                                                                                                                                |

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

```
BOOT_IMAGE=/vmlinuz-6.8.0-54-generic
root=/dev/mapper/ubuntu--vg-ubuntu--lv
ro
```

### 14. cpupower frequency-info

```
analyzing CPU 168:
  current policy: frequency should be within 1.50 GHz and 2.70 GHz.
                  The governor "performance" may decide which speed to use
                  within this range.

  boost state support:
    Supported: yes
    Active: yes
    Boost States: 0
    Total States: 3
    Pstate-P0: 2700MHz
```

### 15. tuned-adm active

```
Current active profile: latency-performance
```

### 16. sysctl

|                              |       |
|------------------------------|-------|
| kernel.numa_balancing        | 1     |
| kernel.randomize_va_space    | 0     |
| vm.compaction_proactiveness  | 20    |
| vm.dirty_background_bytes    | 0     |
| vm.dirty_background_ratio    | 3     |
| 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     |

(Continued on next page)





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## Platform Notes (Continued)

```
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 24.04.2 LTS
```

```
-----
20. Disk information
SPEC is set to: /mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5_A1
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 M7725
Product Family: PowerEdge
Serial:      L302624
```

```
-----
22. dmidecode
Additional information from dmidecode 3.5 follows.  WARNING: Use caution when you interpret this section.
The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately
determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the
"DMTF SMBIOS" standard.
Memory:
  4x 80AD000080AD HMC94AHBRA277N 64 GB 2 rank 6400
 20x 80AD000080AD HMC94AHBRA480N 64 GB 2 rank 6400
```

```
-----
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor:      Dell Inc.
BIOS Version:     1.0.0
BIOS Date:        01/23/2025
BIOS Revision:    1.0
```



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Software Availability: Feb-2025

## Compiler Version Notes

=====  
C | 519.lbm\_r(base, peak) 538.imagick\_r(base, peak) 544.nab\_r(base, peak)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1316 2024\_09\_09)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin  
=====

=====  
C++ | 508.namd\_r(base, peak) 510.parest\_r(base, peak)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1316 2024\_09\_09)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin  
=====

=====  
C++, C | 511.povray\_r(base, peak) 526.blender\_r(base, peak)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1316 2024\_09\_09)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin  
AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1316 2024\_09\_09)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin  
=====

=====  
C++, C, Fortran | 507.cactuBSSN\_r(base, peak)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1316 2024\_09\_09)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin  
AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1316 2024\_09\_09)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin  
AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1316 2024\_09\_09)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin  
=====

=====  
Fortran | 503.bwaves\_r(base, peak) 549.fotonik3d\_r(base, peak) 554.roms\_r(base, peak)  
=====

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1316 2024\_09\_09)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin  
=====

=====  
Fortran, C | 521.wrf\_r(base, peak) 527.cam4\_r(base, peak)  
=====

(Continued on next page)



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Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Compiler Version Notes (Continued)

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1316 2024\_09\_09)

Target: x86\_64-unknown-linux-gnu

Thread model: posix

InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin

AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#1316 2024\_09\_09)

Target: x86\_64-unknown-linux-gnu

Thread model: posix

InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin

## Base Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

Fortran benchmarks:

flang

Benchmarks using both Fortran and C:

flang clang

Benchmarks using both C and C++:

clang++ clang

Benchmarks using Fortran, C, and C++:

clang++ clang flang

## Base Portability Flags

503.bwaves\_r: -DSPEC\_LP64

507.cactuBSSN\_r: -DSPEC\_LP64

508.namd\_r: -DSPEC\_LP64

510.parest\_r: -DSPEC\_LP64

511.povray\_r: -DSPEC\_LP64

519.lbm\_r: -DSPEC\_LP64

521.wrf\_r: -DSPEC\_CASE\_FLAG -Mbyteswapio -DSPEC\_LP64

526.blender\_r: -funsigned-char -DSPEC\_LP64

527.cam4\_r: -DSPEC\_CASE\_FLAG -DSPEC\_LP64

538.imagick\_r: -DSPEC\_LP64

544.nab\_r: -DSPEC\_LP64

549.fotonik3d\_r: -DSPEC\_LP64

554.roms\_r: -DSPEC\_LP64



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CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Base Optimization Flags

C benchmarks:

```
-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-ldist-scalar-expand -fenable-aggressive-gather -O3
-march=znver5 -fveclib=AMDLIBM -ffast-math -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 -lamdalloc
-lflang -ldl
```

C++ benchmarks:

```
-m64 -std=c++14 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false -Wl,-mllvm -Wl,-extra-inliner
-O3 -march=znver5 -fveclib=AMDLIBM -ffast-math -flto
-mllvm -unroll-threshold=100 -mllvm -loop-unswitch-threshold=200000
-mllvm -reduce-array-computations=3 -zopt -lamdlibm -lamdalloc
-lflang -ldl
```

Fortran benchmarks:

```
-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-enable-X86-prefetching
-Wl,-mllvm -Wl,-enable-aggressive-gather=true
-Wl,-mllvm -Wl,-enable-masked-gather-sequence=false -O3 -march=znver5
-fveclib=AMDLIBM -ffast-math -flto -Mrecursive -funroll-loops
-mllvm -lsr-in-nested-loop -mllvm -reduce-array-computations=3
-fepilog-vectorization-of-inductions -zopt -lamdlibm -lamdalloc
-lflang -ldl
```

Benchmarks using both Fortran and C:

```
-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-enable-X86-prefetching
-Wl,-mllvm -Wl,-enable-aggressive-gather=true
-Wl,-mllvm -Wl,-enable-masked-gather-sequence=false -O3 -march=znver5
-fveclib=AMDLIBM -ffast-math -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 -Mrecursive -funroll-loops
-mllvm -lsr-in-nested-loop -fepilog-vectorization-of-inductions
-lamdlibm -lamdalloc -lflang -ldl
```

Benchmarks using both C and C++:

```
-m64 -std=c++14 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
```

(Continued on next page)



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## Base Optimization Flags (Continued)

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

```
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false -Wl,-mllvm -Wl,-extra-inliner  
-O3 -march=znver5 -fveclib=AMDLIBM -ffast-math -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 -lamdlibm -lamdalloc -lflang  
-ldl
```

Benchmarks using Fortran, C, and C++:

```
-m64 -std=c++14 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3  
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false -Wl,-mllvm -Wl,-extra-inliner  
-O3 -march=znver5 -fveclib=AMDLIBM -ffast-math -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 -Mrecursive -funroll-loops  
-mllvm -lsr-in-nested-loop -fepilog-vectorization-of-inductions  
-lamdlibm -lamdalloc -lflang -ldl
```

## Base Other Flags

C benchmarks:

-Wno-unused-command-line-argument

C++ benchmarks:

-Wno-unused-command-line-argument

Fortran benchmarks:

-Wno-unused-command-line-argument

Benchmarks using both Fortran and C:

-Wno-unused-command-line-argument

Benchmarks using both C and C++:

-Wno-unused-command-line-argument

Benchmarks using Fortran, C, and C++:

-Wno-unused-command-line-argument



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Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Peak Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

Fortran benchmarks:

flang

Benchmarks using both Fortran and C:

flang clang

Benchmarks using both C and C++:

clang++ clang

Benchmarks using Fortran, C, and C++:

clang++ clang flang

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

519.lbm\_r: basepeak = yes

538.imagick\_r: basepeak = yes

544.nab\_r: -m64 -flto -Wl,-mllvm -Wl,-ldist-scalar-expand  
-fenable-aggressive-gather -Ofast -march=znver5  
-fveclib=AMDLIBM -ffast-math -fstruct-layout=7  
-mllvm -unroll-threshold=50 -fremap-arrays -fstrip-mining  
-mllvm -inline-threshold=1000  
-mllvm -reduce-array-computations=3 -zopt -lamdlibm  
-lamdalloc -ldl

C++ benchmarks:

508.namd\_r: basepeak = yes

(Continued on next page)



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Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Peak Optimization Flags (Continued)

510.parest\_r: basepeak = yes

Fortran benchmarks:

```
503.bwaves_r: -m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast
-march=znver5 -fveclib=AMDLIBM -ffast-math -flto
-Mrecursive -mllvm -reduce-array-computations=3
-fepilog-vectorization-of-inductions -zopt -lamdlibm
-lamdalloc -ldl -lflang
```

```
549.fotonik3d_r: -m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast
-march=znver5 -fveclib=AMDLIBM -ffast-math -flto
-Mrecursive -mllvm -reduce-array-computations=3
-fepilog-vectorization-of-inductions -fvector-transform
-fscalar-transform -lamdlibm -lamdalloc -ldl -lflang
```

554.roms\_r: Same as 503.bwaves\_r

Benchmarks using both Fortran and C:

```
521.wrf_r: -m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast
-march=znver5 -fveclib=AMDLIBM -ffast-math -flto
-fstruct-layout=7 -mllvm -unroll-threshold=50
-freemap-arrays -fstrip-mining
-mllvm -inline-threshold=1000
-mllvm -reduce-array-computations=3 -zopt -Mrecursive
-funroll-loops -mllvm -lsr-in-nested-loop
-fepilog-vectorization-of-inductions -lamdlibm -lamdalloc
-ldl -lflang
```

527.cam4\_r: basepeak = yes

Benchmarks using both C and C++:

```
511.povray_r: -m64 -std=c++14
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false
-Wl,-mllvm -Wl,-extra-inliner -Ofast -march=znver5
-fveclib=AMDLIBM -ffast-math -flto -fstruct-layout=7
-mllvm -unroll-threshold=50 -mllvm -inline-threshold=1000
-freemap-arrays -mllvm -reduce-array-computations=3 -zopt
-mllvm -unroll-threshold=100
```

(Continued on next page)





# SPEC CPU®2017 Floating Point Rate Result

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Dell Inc.

SPECrate®2017\_fp\_base = 2330

SPECrate®2017\_fp\_peak = 2400

PowerEdge M7725 (AMD EPYC 9755 128-Core Processor)

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Mar-2025

Hardware Availability: Mar-2025

Software Availability: Feb-2025

## Peak Optimization Flags (Continued)

511.povray\_r (continued):

-mllvm -loop-unswitch-threshold=200000 -lamdlibm  
-lamdalloc -ldl

526.blender\_r: basepeak = yes

Benchmarks using Fortran, C, and C++:

507.cactuBSSN\_r: basepeak = yes

## Peak Other Flags

C benchmarks:

-Wno-unused-command-line-argument

C++ benchmarks:

-Wno-unused-command-line-argument

Fortran benchmarks:

-Wno-unused-command-line-argument

Benchmarks using both Fortran and C:

-Wno-unused-command-line-argument

Benchmarks using both C and C++:

-Wno-unused-command-line-argument

Benchmarks using Fortran, C, and C++:

-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.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.xml>

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



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Tested with SPEC CPU®2017 v1.1.9 on 2025-03-05 17:46:07-0500.

Report generated on 2025-03-26 10:35:36 by CPU2017 PDF formatter v6716.

Originally published on 2025-03-25.