



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

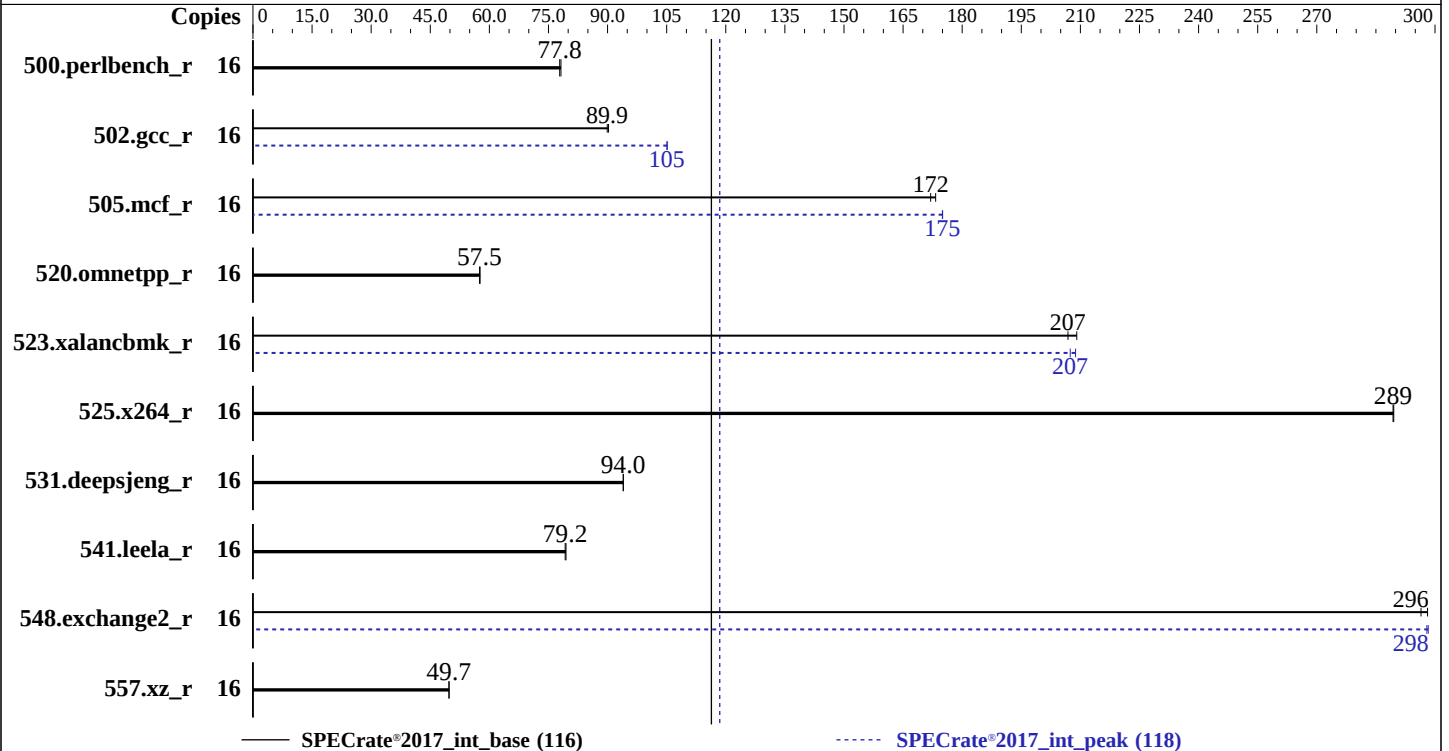
Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024



## Hardware

CPU Name: AMD EPYC 9015  
Max MHz: 4100  
Nominal: 3600  
Enabled: 8 cores, 1 chip, 2 threads/core  
Orderable: 1 chip  
Cache L1: 32 KB I + 48 KB D on chip per core  
L2: 1 MB I+D on chip per core  
L3: 64 MB I+D on chip per chip, 32 MB shared / 4 cores  
Other: None  
Memory: 768 GB (12 x 64 GB 2Rx4 PC5-6400B-R, running at 5200)  
Storage: 40 GB on tmpfs  
Other: CPU Cooling: Air

## Software

OS: Ubuntu 24.04.1 LTS  
6.8.0-49-generic  
Compiler: C/C++/Fortran: Version 5.0.0 of AOCC  
Parallel: No  
Firmware: Version 1.1.2 released Feb-2025  
File System: tmpfs  
System State: Run level 5 (graphical multi-user)  
Base Pointers: 64-bit  
Peak Pointers: 32/64-bit  
Other: None  
Power Management: BIOS and OS set to prefer performance at the cost of additional power usage.



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024

## Results Table

| Benchmark       | Base   |             |             |             |             |         |       | Peak   |             |             |             |             |         |       |
|-----------------|--------|-------------|-------------|-------------|-------------|---------|-------|--------|-------------|-------------|-------------|-------------|---------|-------|
|                 | Copies | Seconds     | Ratio       | Seconds     | Ratio       | Seconds | Ratio | Copies | Seconds     | Ratio       | Seconds     | Ratio       | Seconds | Ratio |
| 500.perlbench_r | 16     | <u>327</u>  | <u>77.8</u> | 326         | 78.2        |         |       | 16     | <u>327</u>  | <u>77.8</u> | 326         | 78.2        |         |       |
| 502.gcc_r       | 16     | <u>252</u>  | <u>89.9</u> | 251         | 90.2        |         |       | 16     | 215         | 105         | <u>216</u>  | <u>105</u>  |         |       |
| 505.mcf_r       | 16     | <u>150</u>  | <u>172</u>  | 149         | 173         |         |       | 16     | <u>148</u>  | <u>175</u>  | 148         | 175         |         |       |
| 520.omnetpp_r   | 16     | 364         | 57.6        | <u>365</u>  | <u>57.5</u> |         |       | 16     | 364         | 57.6        | <u>365</u>  | <u>57.5</u> |         |       |
| 523.xalancbmk_r | 16     | <u>81.7</u> | <u>207</u>  | 80.8        | 209         |         |       | 16     | <u>81.5</u> | <u>207</u>  | 80.9        | 209         |         |       |
| 525.x264_r      | 16     | 96.8        | 290         | <u>96.8</u> | <u>289</u>  |         |       | 16     | 96.8        | 290         | <u>96.8</u> | <u>289</u>  |         |       |
| 531.deepsjeng_r | 16     | <u>195</u>  | <u>94.0</u> | 195         | 94.0        |         |       | 16     | <u>195</u>  | <u>94.0</u> | 195         | 94.0        |         |       |
| 541.leela_r     | 16     | 334         | 79.4        | <u>334</u>  | <u>79.2</u> |         |       | 16     | 334         | 79.4        | <u>334</u>  | <u>79.2</u> |         |       |
| 548.exchange2_r | 16     | <u>141</u>  | <u>296</u>  | 141         | 298         |         |       | 16     | 141         | 298         | <u>141</u>  | <u>298</u>  |         |       |
| 557.xz_r        | 16     | <u>348</u>  | <u>49.7</u> | 347         | 49.8        |         |       | 16     | <u>348</u>  | <u>49.7</u> | 347         | 49.8        |         |       |

SPECrate®2017\_int\_base = 116

SPECrate®2017\_int\_peak = 118

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.



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024

## 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\_A1.3/amd\_rate\_aocc500\_znver5\_A\_lib/lib:/mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5\_A1.3/amd\_rate\_aocc500\_znver5\_A\_lib/lib32:"

MALLOC\_CONF = "retain:true"

Environment variables set by runcpu during the 523.xalancbmk\_r peak run:

MALLOC\_CONF = "thp:always"

## General Notes

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

Benchmark run from a 40 GB ramdisk created with the cmd: "mount -t tmpfs -o size=40G 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

Adaptive Allocation : Enabled

Dram Refresh Delay : Performance

DIMM Self Healing -

on Uncorrectable Memory Error : Disabled

Sysinfo program /mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5\_A1.3/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on SLR7751-R7715 Wed Jun 4 13:59:24 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 (255.4-1ubuntu8.4)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024

## Platform Notes (Continued)

```
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 SLR7751-R7715 6.8.0-49-generic #49-Ubuntu SMP PREEMPT_DYNAMIC Mon Nov 4 02:06:24 UTC 2024 x86_64
x86_64 x86_64 GNU/Linux
```

```
2. w
13:59:24 up 3 min, 1 user, load average: 0.10, 0.04, 0.01
USER  TTY  FROM          LOGIN@  IDLE   JCPU   PCPU   WHAT
root  tty1  -             13:56   1:04   1.12s  0.33s /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            3093061
nofiles            1024
vmemory(kbytes)    unlimited
locks              unlimited
rtprio             0
```

```
5. sysinfo process ancestry
/sbin/init
/bin/login -p --
-bash
/bin/bash /home/DellFiles/bin/DELL_rate.sh
/bin/bash /home/DellFiles/bin/dell-run-main.sh rate
/bin/bash /home/DellFiles/bin/dell-run-main.sh rate
/bin/bash /home/DellFiles/bin/AMD/dell-run-speccpu.sh rate --define DL-VERS=6.3_T6 --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-VERS=6.3_T6 --output_format html,pdf,txt intrate
runcpu --configfile amd_rate_aocc500_znver5_A1.cfg --tune all --reportable --iterations 2 --define
DL-VERS=6.3_T6 --output_format html,pdf,txt --nopower --runmode rate --tune base:peak --size
test:train:refrate intrate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.001/temlogs/preenv.intrate.001.0.log --lognum 001.0 --from_runcpu 2
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024

## Platform Notes (Continued)

```
specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5_A1.3
```

```
-----
6. /proc/cpuinfo
model name      : AMD EPYC 9015 8-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      : 8
siblings       : 16
1 physical ids (chips)
16 processors (hardware threads)
physical id 0: core ids 0-3,8-11
physical id 0: apicids 0-7,16-23
```

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):            16
On-line CPU(s) list: 0-15
Vendor ID:         AuthenticAMD
BIOS Vendor ID:    AMD
Model name:        AMD EPYC 9015 8-Core Processor
BIOS Model name:   AMD EPYC 9015 8-Core Processor
BIOS CPU family:   107
CPU family:        26
Model:             2
Thread(s) per core: 2
Core(s) per socket: 8
Socket(s):         1
Stepping:          1
Frequency boost:    enabled
CPU(s) scaling MHz: 88%
CPU max MHz:       4113.2808
CPU min MHz:       1500.0000
BogoMIPS:          7189.51
Flags:              fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
                   pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr_opt pdpe1gb
                   rdtscp lm constant_tsc rep_good amd_lbr_v2 nopl nonstop_tsc cpuid
                   extd_apicid aperfmperf rapl pni pclmulqdq monitor ssse3 fma cx16 pcid
                   sse4_1 sse4_2 x2apic movbe popcnt aes xsave avx f16c rdrand lahf_lm
                   cmp_legacy 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
```

CPU @ 3.6GHz

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024

## Platform Notes (Continued)

cqm\_mbm\_local user\_shstk avx\_vnni avx512\_bf16 clzero irperf  
xsaveerptr rdpru wbnoinvd amd\_ppin cppc arat npt lbrv svm\_lock  
nrip\_save tsc\_scale vmcb\_clean flushbyasid decodeassists pausefilter  
pfthreshold avic v\_vmsave\_vmload vgif x2avic v\_spec\_ctrl vnni  
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: 384 KiB (8 instances)  
L1i cache: 256 KiB (8 instances)  
L2 cache: 8 MiB (8 instances)  
L3 cache: 64 MiB (2 instances)  
NUMA node(s): 2  
NUMA node0 CPU(s): 0-3,8-11  
NUMA node1 CPU(s): 4-7,12-15  
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; PBRBS-eIBRS Not affected; BHI Not affected  
Vulnerability Srbds: Not affected  
Vulnerability Tsx async abort: Not affected

From lscpu --cache:

| NAME | ONE-SIZE | ALL-SIZE | WAYS | TYPE        | LEVEL | SETS  | PHY-LINE | COHERENCY-SIZE |
|------|----------|----------|------|-------------|-------|-------|----------|----------------|
| L1d  | 48K      | 384K     | 12   | Data        | 1     | 64    | 1        | 64             |
| L1i  | 32K      | 256K     | 8    | Instruction | 1     | 64    | 1        | 64             |
| L2   | 1M       | 8M       | 16   | Unified     | 2     | 1024  | 1        | 64             |
| L3   | 32M      | 64M      | 16   | Unified     | 3     | 32768 | 1        | 64             |

8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.

available: 2 nodes (0-1)  
node 0 cpus: 0-3,8-11  
node 0 size: 386355 MB  
node 0 free: 382377 MB  
node 1 cpus: 4-7,12-15  
node 1 size: 386980 MB  
node 1 free: 386446 MB  
node distances:  
node 0 1  
0: 10 12  
1: 12 10

9. /proc/meminfo

MemTotal: 791896292 kB

10. who -r

run-level 5 Jun 4 13:55

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024

## Platform Notes (Continued)

11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.4)

| Default Target | Status  |
|----------------|---------|
| graphical      | running |

12. Services, from systemctl list-unit-files

| STATE           | UNIT FILES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| enabled         | ModemManager apparmor appport 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 uuid                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| masked          | cryptdisks cryptdisks-early hwclock multipath-tools-boot screen-cleanup sudo x11-common                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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

```
BOOT_IMAGE=/boot/vmlinuz-6.8.0-49-generic
root=UUID=8458ae54-58cc-4621-9289-b1d743fde503
ro
```

14. cpupower frequency-info

```
analyzing CPU 9:
  current policy: frequency should be within 1.50 GHz and 3.60 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: 3600MHz
```

15. tuned-adm active

Current active profile: throughput-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    | 10    |
| vm.dirty_bytes               | 0     |
| vm.dirty_expire_centisecs    | 3000  |
| vm.dirty_ratio               | 8     |
| vm.dirty_writeback_centisecs | 500   |
| vm.dirtytime_expire_seconds  | 43200 |

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024

## Platform Notes (Continued)

```
vm.extfrag_threshold      500
vm.min_unmapped_ratio     1
vm.nr_hugepages           0
vm.nr_hugepages_mempolicy 0
vm.nr_overcommit_hugepages 0
vm.swappiness             1
vm.watermark_boost_factor 15000
vm.watermark_scale_factor 10
vm.zone_reclaim_mode      1
```

```
-----
17. /sys/kernel/mm/transparent_hugepage
defrag      [always] defer defer+madvise madvise never
enabled     [always] madvise never
hpage_pmd_size 2097152
shmem_enabled always within_size advise [never] deny force
```

```
-----
18. /sys/kernel/mm/transparent_hugepage/khugepaged
alloc_sleep_millisecs 60000
defrag                1
max_ptes_none         511
max_ptes_shared       256
max_ptes_swap         64
pages_to_scan         4096
scan_sleep_millisecs 10000
```

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

```
-----
20. Disk information
SPEC is set to: /mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5_A1.3
Filesystem      Type  Size  Used Avail Use% Mounted on
tmpfs           tmpfs  40G   3.3G   37G   9% /mnt/ramdisk
```

```
-----
21. /sys/devices/virtual/dmi/id
Vendor:      Dell Inc.
Product:     PowerEdge R7715
Product Family: PowerEdge
Serial:      SLR7751
```

```
-----
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:
12x 802C0000802C MTC40F2046S1RC64BD1 64 GB 2 rank 6400, configured at 5200
```

```
-----
23. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor:      Dell Inc.
BIOS Version:     1.1.2
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024

## Platform Notes (Continued)

BIOS Date: 02/20/2025  
BIOS Revision: 1.1

## Compiler Version Notes

```
=====
C      | 502.gcc_r(peak)
-----
AMD clang version 17.0.6 (CLANG: AOCC_5.0.0-Build#1316 2024_09_09)
Target: i386-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin
-----

=====
C      | 500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak)
      | 557.xz_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      | 502.gcc_r(peak)
-----
AMD clang version 17.0.6 (CLANG: AOCC_5.0.0-Build#1316 2024_09_09)
Target: i386-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-5.0.0-4925-1316/bin
-----

=====
C      | 500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak)
      | 557.xz_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++    | 520.omnetpp_r(base, peak) 523.xalancbmk_r(base, peak) 531.deepsjeng_r(base, peak)
      | 541.leela_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 | 548.exchange2_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
-----
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024

## Compiler Version Notes (Continued)

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

## Base Portability Flags

500.perlbench\_r: -DSPEC\_LINUX\_X64 -DSPEC\_LP64  
502.gcc\_r: -DSPEC\_LP64  
505.mcf\_r: -DSPEC\_LP64  
520.omnetpp\_r: -DSPEC\_LP64  
523.xalancbmk\_r: -DSPEC\_LINUX -DSPEC\_LP64  
525.x264\_r: -DSPEC\_LP64  
531.deepsjeng\_r: -DSPEC\_LP64  
541.leela\_r: -DSPEC\_LP64  
548.exchange2\_r: -DSPEC\_LP64  
557.xz\_r: -DSPEC\_LP64

## 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  
-Wl,-mllvm -Wl,-extra-inliner -z muldefs -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 -lflang  
-lamdalloc-ext -ldl

C++ benchmarks:

-m64 -std=c++14 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024

## Base Optimization Flags (Continued)

C++ benchmarks (continued):

```
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-do-block-reorder=advanced -z muldefs -O3 -march=znver5
-fveclib=AMDLIBM -ffast-math -flto -mllvm -unroll-threshold=100
-mllvm -loop-unswitch-threshold=2000000
-mllvm -reduce-array-computations=3 -zopt -fno-PIE -no-pie
-fvirtual-function-elimination -fvisibility=hidden
-mllvm -do-block-reorder=advanced -lamdlibm -lflang -lamdalloc-ext
-ldl
```

Fortran benchmarks:

```
-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-inline-recursion=4 -Wl,-mllvm -Wl,-lsr-in-nested-loop
-Wl,-mllvm -Wl,-enable-iv-split -z muldefs -O3 -march=znver5
-fveclib=AMDLIBM -ffast-math -flto
-fepilog-vectorization-of-inductions -mllvm -optimize-strided-mem-cost
-floop-transform -mllvm -unroll-aggressive -mllvm -unroll-threshold=500
-lamdlibm -lflang -lamdalloc -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
```

## Peak Compiler Invocation

C benchmarks:

```
clang
```

C++ benchmarks:

```
clang++
```

Fortran benchmarks:

```
flang
```



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024

## Peak Portability Flags

500.perlbench\_r: -DSPEC\_LINUX\_X64 -DSPEC\_LP64  
502.gcc\_r: -D\_FILE\_OFFSET\_BITS=64  
505.mcf\_r: -DSPEC\_LP64  
520.omnetpp\_r: -DSPEC\_LP64  
523.xalancbmk\_r: -DSPEC\_LINUX -DSPEC\_LP64  
525.x264\_r: -DSPEC\_LP64  
531.deepsjeng\_r: -DSPEC\_LP64  
541.leela\_r: -DSPEC\_LP64  
548.exchange2\_r: -DSPEC\_LP64  
557.xz\_r: -DSPEC\_LP64

## Peak Optimization Flags

C benchmarks:

500.perlbench\_r: basepeak = yes

502.gcc\_r: -m32 -flto -Wl,-mllvm -Wl,-ldist-scalar-expand  
-fenable-aggressive-gather -Wl,-mllvm -Wl,-extra-inliner  
-z muldefs -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 -fgnu89-inline  
-lamdalloc

505.mcf\_r: -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 -flto -fstruct-layout=7  
-mllvm -unroll-threshold=50 -fremap-arrays -fstrip-mining  
-mllvm -inline-threshold=1000  
-mllvm -reduce-array-computations=3 -zopt -lamdlibm  
-lflang -lamdalloc-ext -ldl

525.x264\_r: basepeak = yes

557.xz\_r: basepeak = yes

C++ benchmarks:

520.omnetpp\_r: basepeak = yes

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024

## Peak Optimization Flags (Continued)

```
523.xalancbmk_r: -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 -flto
-mllvm -unroll-threshold=100
-mllvm -reduce-array-computations=3 -zopt
-fvirtual-function-elimination -fvisibility=hidden
-mllvm -do-block-reorder=advanced -lamdlibm -lflang
-lamdalloc-ext -ldl
```

531.deepsjeng\_r: basepeak = yes

541.leela\_r: basepeak = yes

Fortran benchmarks:

```
-m64 -Wl, -mllvm -Wl, -align-all-nofallthru-blocks=6
-Wl, -mllvm -Wl, -reduce-array-computations=3
-Wl, -mllvm -Wl, -inline-recursion=4 -Wl, -mllvm -Wl, -lsr-in-nested-loop
-Wl, -mllvm -Wl, -enable-iv-split -O3 -march=znver5 -fveclib=AMDLIBM
-ffast-math -flto -fepilog-vectorization-of-inductions
-mllvm -optimize-strided-mem-cost -floop-transform
-mllvm -unroll-aggressive -mllvm -unroll-threshold=500 -lamdlibm
-lflang -lamdalloc -ldl
```

## Peak Other Flags

C benchmarks (except as noted below):

-Wno-unused-command-line-argument

502.gcc\_r: -L/usr/lib32 -Wno-unused-command-line-argument

-L/home/work/cpu2017/v119/aocc5/1316/amd\_rate\_aocc500\_znver5\_A\_lib/lib32

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>



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017\_int\_base = 116

PowerEdge R7715 (AMD EPYC 9015 8-Core Processor)

SPECrate®2017\_int\_peak = 118

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Mar-2025

Software Availability: Nov-2024

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>

SPEC CPU and SPECrate are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester. For other inquiries, please contact [info@spec.org](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.9 on 2025-06-04 09:59:23-0400.

Report generated on 2025-07-01 19:09:43 by CPU2017 PDF formatter v6716.

Originally published on 2025-07-01.