



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 1390

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

SPECrate®2017_int_peak = 1420

CPU2017 License: 6573

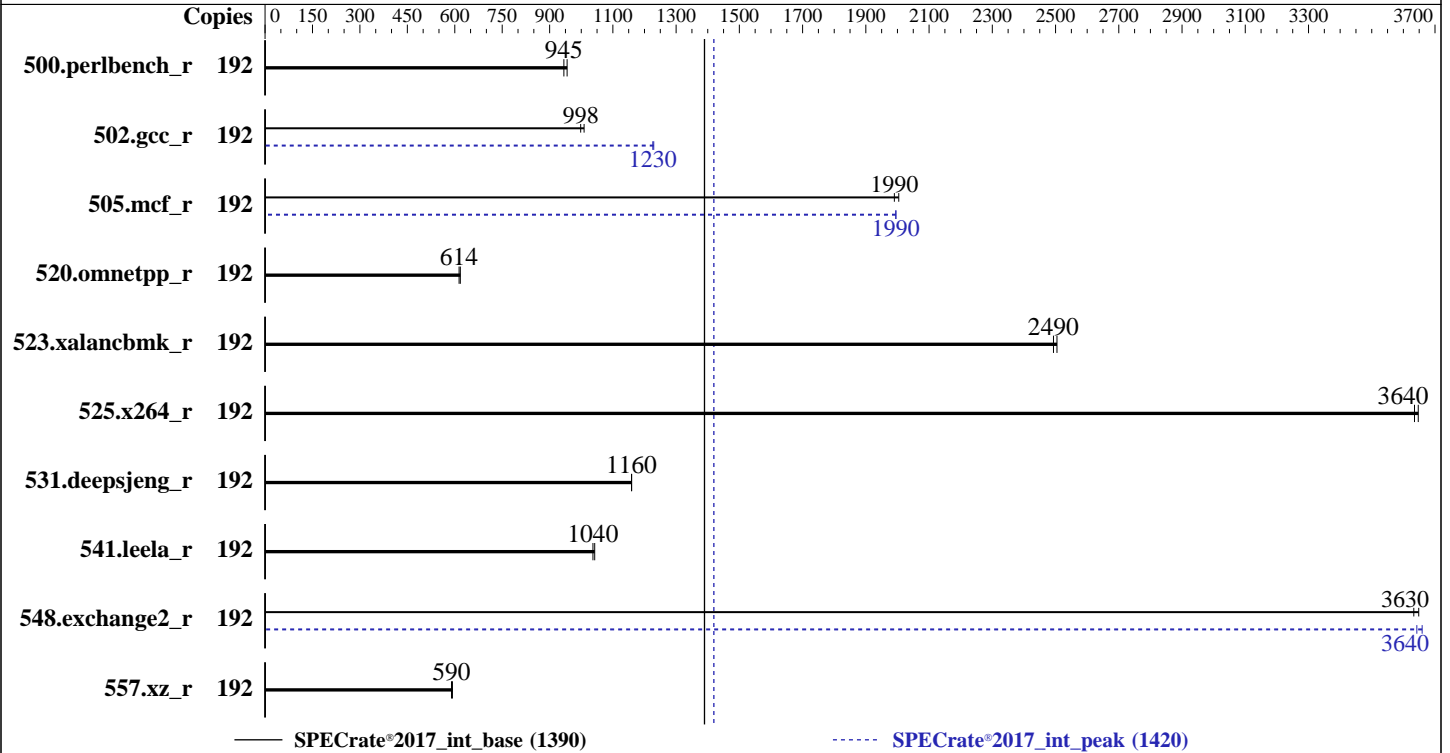
Test Date: Jun-2025

Test Sponsor: Dell Inc.

Hardware Availability: Jan-2025

Tested by: Dell Inc.

Software Availability: Apr-2025



Hardware

CPU Name: AMD EPYC 9475F
 Max MHz: 4800
 Nominal: 3650
 Enabled: 96 cores, 2 chips, 2 threads/core
 Orderable: 1,2 chips
 Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 1 MB I+D on chip per core
 L3: 256 MB I+D on chip per chip, 32 MB shared / 6 cores
 Other: None
 Memory: 1536 GB (24 x 64 GB 2Rx4 PC5-6400B-R)
 Storage: 110 GB on tmpfs
 Other: CPU Cooling: DLC

Software

OS: Ubuntu 24.04.1 LTS
 6.8.0-57-generic
 Compiler: C/C++/Fortran: Version 5.0.0 of AOCC
 Parallel: No
 Firmware: Version 1.2.4 released May-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 = 1390

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

SPECrate®2017_int_peak = 1420

CPU2017 License: 6573
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

Test Date: Jun-2025
Hardware Availability: Jan-2025
Software Availability: Apr-2025

Results Table

| Benchmark | Base | | | | | | Peak | | | | | | | |
|-----------------|--------|-------------|-------------|-------------|-------------|---------|-------|--------|-------------|-------------|-------------|-------------|---------|-------|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 500.perlbench_r | 192 | 320 | 955 | <u>323</u> | <u>945</u> | | | 192 | 320 | 955 | <u>323</u> | <u>945</u> | | |
| 502.gcc_r | 192 | 269 | 1010 | <u>272</u> | <u>998</u> | | | 192 | <u>222</u> | <u>1230</u> | 221 | 1230 | | |
| 505.mcf_r | 192 | 155 | 2000 | <u>156</u> | <u>1990</u> | | | 192 | 155 | 2000 | <u>156</u> | <u>1990</u> | | |
| 520.omnetpp_r | 192 | 408 | 618 | <u>411</u> | <u>614</u> | | | 192 | 408 | 618 | <u>411</u> | <u>614</u> | | |
| 523.xalancbmk_r | 192 | <u>81.3</u> | <u>2490</u> | 81.0 | 2500 | | | 192 | <u>81.3</u> | <u>2490</u> | 81.0 | 2500 | | |
| 525.x264_r | 192 | 92.2 | 3650 | <u>92.5</u> | <u>3640</u> | | | 192 | 92.2 | 3650 | <u>92.5</u> | <u>3640</u> | | |
| 531.deepsjeng_r | 192 | <u>190</u> | <u>1160</u> | 190 | 1160 | | | 192 | <u>190</u> | <u>1160</u> | 190 | 1160 | | |
| 541.leela_r | 192 | 305 | 1040 | <u>307</u> | <u>1040</u> | | | 192 | 305 | 1040 | <u>307</u> | <u>1040</u> | | |
| 548.exchange2_r | 192 | 138 | 3650 | <u>138</u> | <u>3630</u> | | | 192 | 137 | 3660 | <u>138</u> | <u>3640</u> | | |
| 557.xz_r | 192 | 350 | 593 | <u>352</u> | <u>590</u> | | | 192 | 350 | 593 | <u>352</u> | <u>590</u> | | |

SPECrate®2017_int_base = 1390

SPECrate®2017_int_peak = 1420

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 = 1390

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

SPECrate®2017_int_peak = 1420

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Jan-2025

Software Availability: Apr-2025

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"
```

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 110 GB ramdisk created with the cmd: "mount -t tmpfs -o size=110G 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 SLR7784-R7725 Sun Jun 15 23:25:59 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-lubuntu8.4)
12. Failed units, from systemctl list-units --state=failed
13. Services, from systemctl list-unit-files
14. Linux kernel boot-time arguments, from /proc/cmdline
15. cpupower frequency-info
16. tuned-adm active

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 1390

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

SPECrate®2017_int_peak = 1420

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Jan-2025

Software Availability: Apr-2025

Platform Notes (Continued)

- 17. sysctl
- 18. /sys/kernel/mm/transparent_hugepage
- 19. /sys/kernel/mm/transparent_hugepage/khugepaged
- 20. OS release
- 21. Disk information
- 22. /sys/devices/virtual/dmi/id
- 23. dmidecode
- 24. BIOS

```
1. uname -a
Linux SLR7784-R7725 6.8.0-57-generic #59-Ubuntu SMP PREEMPT_DYNAMIC Sat Mar 15 17:40:59 UTC 2025 x86_64
x86_64 x86_64 GNU/Linux
```

```
2. w
23:25:59 up 4 min, 1 user, load average: 0.19, 0.06, 0.01
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
root      tty1     -             23:21   39.00s  1.19s  0.36s  /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            6189312
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 --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
--output_format html,pdf,txt intrate
runcpu --configfile amd_rate_aocc500_znver5_A1.cfg --tune all --reportable --iterations 2 --define
DL-VERS=6.3 --output_format html,pdf,txt --nopower --runmode rate --tune base:peak --size
test:train:refrate intrate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.001/templogs/preenv.intrate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2017-1.1.9-aocc500-znerv5_A1.3
```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 1390

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

SPECrate®2017_int_peak = 1420

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Jan-2025

Software Availability: Apr-2025

Platform Notes (Continued)

6. /proc/cpuinfo

```

model name      : AMD EPYC 9475F 48-Core Processor
vendor_id      : AuthenticAMD
cpu family     : 26
model          : 2
stepping       : 1
microcode      : 0xb002147
bugs           : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
TLB size       : 192 4K pages
cpu cores      : 48
siblings       : 96
2 physical ids (chips)
192 processors (hardware threads)
physical id 0: core ids 0-5,8-13,16-21,24-29,32-37,40-45,48-53,56-61
physical id 1: core ids 0-5,8-13,16-21,24-29,32-37,40-45,48-53,56-61
physical id 0: apicids 0-11,16-27,32-43,48-59,64-75,80-91,96-107,112-123
physical id 1: apicids 128-139,144-155,160-171,176-187,192-203,208-219,224-235,240-251

```

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):                192
On-line CPU(s) list:  0-191
Vendor ID:             AuthenticAMD
BIOS Vendor ID:       AMD
Model name:            AMD EPYC 9475F 48-Core Processor
BIOS Model name:      AMD EPYC 9475F 48-Core Processor
BIOS CPU family:      107
CPU family:            26
Model:                 2
Thread(s) per core:   2
Core(s) per socket:   48
Socket(s):             2
Stepping:              1
Frequency boost:       enabled
CPU(s) scaling MHz:   76%
CPU max MHz:           4819.1401
CPU min MHz:           1500.0000
BogoMIPS:              7290.28
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
rdtsmp lm constant_tsc rep_good amd_lbr_v2 nopl nonstop_tsc cpuid
extd_apicid aperfmperf rapl pni pclmulqdq monitor ssse3 fma cx16 pcid
sse4_1 sse4_2 x2apic movbe popcnt aes xsave avx f16c rdrand lahf_lm
cmp_legacy extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch
osvw ibs skinit wdt tce topoext perfctr_core perfctr_nb bpext
perfctr_llc mwaitx cpb cat_l3 cdp_l3 hw_pstate ssbd mba perfmon_v2
ibrs ibpb stibp ibrs_enhanced vmmcall fsgsbase tsc_adjust bmi1 avx2
smep bmi2 invpcid cqm rdt_a avx512f avx512dq rdseed adx smap
avx512ifma clflushopt clwb avx512cd sha_ni avx512bw avx512vl xsaveopt
xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
cqm_mbm_local user_shstk avx_vnni avx512_bf16 clzero irperf

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 1390

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

SPECrate®2017_int_peak = 1420

CPU2017 License: 6573
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

Test Date: Jun-2025
Hardware Availability: Jan-2025
Software Availability: Apr-2025

Platform Notes (Continued)

xsaveerptr rdpru wbnoinvd amd_ppin cppc amd_ibpb_ret arat npt lbrv
svm_lock nrp_save tsc_scale vmcb_clean flushbyasid decodeassists
pausefilter pfthreshold avic v_vmsave_vmload vgif x2avic v_spec_ctrl
vnmi avx512vbmi umip pku ospke avx512_vbmi2 gfni vaes vpclmulqdq
avx512_vnni avx512_bitalg avx512_vpopcntdq la57 rdpid bus_lock_detect
movdiri movdir64b overflow_recov succor smca avx512_vp2intersect
flush_llid debug_swap

| | |
|---------------------------------------|--|
| Lld cache: | 4.5 MiB (96 instances) |
| Lli cache: | 3 MiB (96 instances) |
| L2 cache: | 96 MiB (96 instances) |
| L3 cache: | 512 MiB (16 instances) |
| NUMA node(s): | 8 |
| NUMA node0 CPU(s): | 0-11,96-107 |
| NUMA node1 CPU(s): | 12-23,108-119 |
| NUMA node2 CPU(s): | 24-35,120-131 |
| NUMA node3 CPU(s): | 36-47,132-143 |
| NUMA node4 CPU(s): | 48-59,144-155 |
| NUMA node5 CPU(s): | 60-71,156-167 |
| NUMA node6 CPU(s): | 72-83,168-179 |
| NUMA node7 CPU(s): | 84-95,180-191 |
| Vulnerability Gather data sampling: | Not affected |
| Vulnerability Itlb multihit: | Not affected |
| Vulnerability Lltf: | 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 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 |
|------|----------|----------|------|-------------|-------|-------|----------|----------------|
| Lld | 48K | 4.5M | 12 | Data | 1 | 64 | 1 | 64 |
| Lli | 32K | 3M | 8 | Instruction | 1 | 64 | 1 | 64 |
| L2 | 1M | 96M | 16 | Unified | 2 | 1024 | 1 | 64 |
| L3 | 32M | 512M | 16 | Unified | 3 | 32768 | 1 | 64 |

8. numactl --hardware

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

```

available: 8 nodes (0-7)
node 0 cpus: 0-11,96-107
node 0 size: 192773 MB
node 0 free: 192021 MB
node 1 cpus: 12-23,108-119
node 1 size: 193525 MB
node 1 free: 193147 MB
node 2 cpus: 24-35,120-131
node 2 size: 193525 MB
node 2 free: 193141 MB
node 3 cpus: 36-47,132-143
node 3 size: 193509 MB
node 3 free: 193162 MB
node 4 cpus: 48-59,144-155

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 1390

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

SPECrate®2017_int_peak = 1420

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Jan-2025

Software Availability: Apr-2025

Platform Notes (Continued)

```

node 4 size: 193525 MB
node 4 free: 193122 MB
node 5 cpus: 60-71,156-167
node 5 size: 193525 MB
node 5 free: 193157 MB
node 6 cpus: 72-83,168-179
node 6 size: 193525 MB
node 6 free: 187913 MB
node 7 cpus: 84-95,180-191
node 7 size: 193490 MB
node 7 free: 193108 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:      1584540136 kB

```

```

10. who -r
run-level 5 Jun 15 23:21

```

```

11. Systemd service manager version: systemd 255 (255.4-lubuntu8.4)
Default Target    Status
graphical         degraded

```

```

12. Failed units, from systemctl list-units --state=failed
UNIT                                LOAD    ACTIVE SUB    DESCRIPTION
* cxl-monitor.service loaded failed failed CXL Monitor Daemon
Legend: LOAD    -> Reflects whether the unit definition was properly loaded.
ACTIVE -> The high-level unit activation state, i.e. generalization of SUB.
SUB     -> The low-level unit activation state, values depend on unit type.
1 loaded units listed.

```

```

13. Services, from systemctl list-unit-files
STATE UNIT FILES
enabled ModemManager apparmor apport blk-availability cloud-config cloud-final cloud-init
cloud-init-local console-setup cron cxl-monitor 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-sysex

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 1390

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

SPECrate®2017_int_peak = 1420

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Jan-2025

Software Availability: Apr-2025

Platform Notes (Continued)

```

indirect      systemd-time-wait-sync upower
masked        systemd-sysupdate systemd-sysupdate-reboot uidd
               cryptdisks cryptdisks-early hwclock multipath-tools-boot screen-cleanup sudo x11-common

```

```

-----
14. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/vmlinuz-6.8.0-57-generic
root=/dev/mapper/ubuntu--vg-ubuntu--lv
ro

```

```

-----
15. cpupower frequency-info
analyzing CPU 21:
  current policy: frequency should be within 1.50 GHz and 3.65 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: 3650MHz

```

```

-----
16. tuned-adm active
  Current active profile: throughput-performance

```

```

-----
17. sysctl
kernel.numa_balancing          1
kernel.randomize_va_space      0
vm.compaction_proactiveness     20
vm.dirty_background_bytes      0
vm.dirty_background_ratio      10
vm.dirty_bytes                  0
vm.dirty_expire_centisecs     3000
vm.dirty_ratio                  8
vm.dirty_writeback_centisecs   500
vm.dirtytime_expire_seconds    43200
vm.extfrag_threshold           500
vm.min_unmapped_ratio          1
vm.nr_hugepages                 0
vm.nr_hugepages_mempolicy      0
vm.nr_overcommit_hugepages     0
vm.swappiness                   1
vm.watermark_boost_factor      15000
vm.watermark_scale_factor      10
vm.zone_reclaim_mode           1

```

```

-----
18. /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

```

```

-----
19. /sys/kernel/mm/transparent_hugepage/khugepaged
alloc_sleep_millisecs  60000
defrag                  1

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 1390

SPECrate®2017_int_peak = 1420

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Jan-2025

Software Availability: Apr-2025

Platform Notes (Continued)

```

max_ptes_none          511
max_ptes_shared        256
max_ptes_swap          64
pages_to_scan          4096
scan_sleep_millisecs   10000

```

20. OS release

```

From /etc/*-release /etc/*-version
os-release Ubuntu 24.04.1 LTS

```

21. 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 110G  3.3G  107G   3% /mnt/ramdisk

```

22. /sys/devices/virtual/dmi/id

```

Vendor:          Dell Inc.
Product:         PowerEdge R7725
Product Family: PowerEdge
Serial:          SLR7784

```

23. dmidecode

Additional information from dmidecode 3.5 follows. **WARNING:** Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

```

Memory:
  24x 80AD000080AD HMC94AHBRA277N 64 GB 2 rank 6400

```

24. BIOS

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

```

BIOS Vendor:      Dell Inc.
BIOS Version:     1.2.4
BIOS Date:        05/20/2025
BIOS Revision:    1.2

```

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

```

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 1390

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

SPECrate®2017_int_peak = 1420

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Jan-2025

Software Availability: Apr-2025

Compiler Version Notes (Continued)

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
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



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 1390

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

SPECrate®2017_int_peak = 1420

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Jan-2025

Software Availability: Apr-2025

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
-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=200000
-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
```



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 1390

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

SPECrate®2017_int_peak = 1420

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Jan-2025

Software Availability: Apr-2025

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

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

(Continued on next page)



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 1390

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

SPECrate®2017_int_peak = 1420

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Jan-2025

Software Availability: Apr-2025

Peak Optimization Flags (Continued)

```
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

523.xalancbmk_r: basepeak = yes

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
```



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2017_int_base = 1390

PowerEdge R7725 (AMD EPYC 9475F 48-Core Processor)

SPECrate®2017_int_peak = 1420

CPU2017 License: 6573

Test Sponsor: Dell Inc.

Tested by: Dell Inc.

Test Date: Jun-2025

Hardware Availability: Jan-2025

Software Availability: Apr-2025

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>

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.

Tested with SPEC CPU®2017 v1.1.9 on 2025-06-16 00:25:58-0400.

Report generated on 2025-07-01 19:09:47 by CPU2017 PDF formatter v6716.

Originally published on 2025-07-01.