



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SD535 V3  
(2.60 GHz, AMD EPYC 9115)

SPECspeed®2017\_int\_base = 17.4

SPECspeed®2017\_int\_peak = 17.7

CPU2017 License: 9017

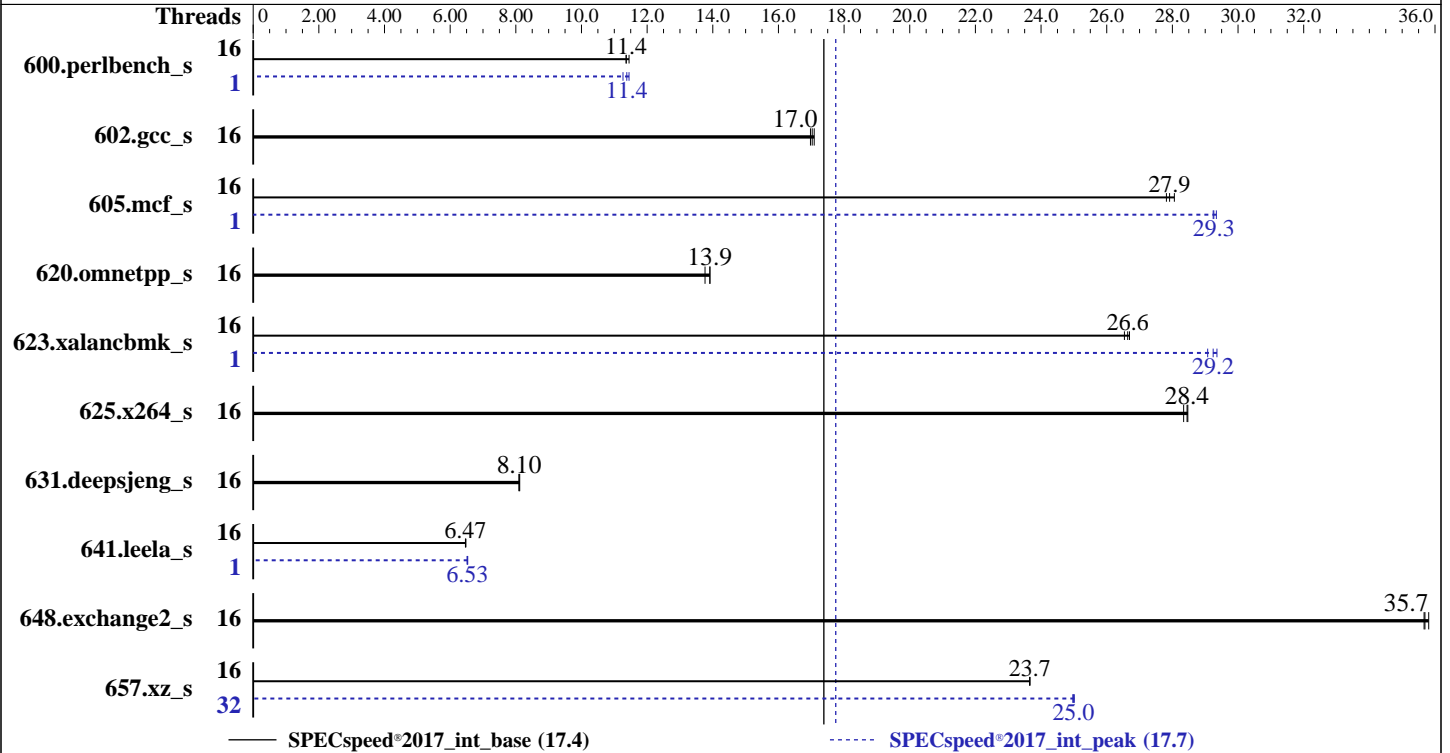
Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Feb-2025

Hardware Availability: Feb-2025

Software Availability: Oct-2024



### Hardware

CPU Name: AMD EPYC 9115  
 Max MHz: 4100  
 Nominal: 2600  
 Enabled: 16 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 / 8 cores  
 Other: None  
 Memory: 384 GB (12 x 32 GB 2Rx8 PC5-6400B-R, running at 6000)  
 Storage: 1 x 960 GB M.2 SATA SSD  
 Other: CPU Cooling: Air

### Software

OS: Red Hat Enterprise Linux 9.4 (Plow)  
 Kernel 5.14.0-427.13.1.el9\_4.x86\_64  
 Compiler: C/C++/Fortran: Version 5.0.0 of AOCC  
 Parallel: Yes  
 Firmware: Lenovo BIOS Version GPE113I 4.10 released Dec-2024  
 File System: xfs  
 System State: Run level 3 (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



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SD535 V3  
(2.60 GHz, AMD EPYC 9115)

SPECspeed®2017\_int\_base = 17.4

SPECspeed®2017\_int\_peak = 17.7

**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology

**Test Date:** Feb-2025  
**Hardware Availability:** Feb-2025  
**Software Availability:** Oct-2024

### Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	16	<b>156</b>	<b>11.4</b>	155	11.4	156	11.4	1	<b>156</b>	<b>11.4</b>	155	11.4	158	11.3
602.gcc_s	16	<b>234</b>	<b>17.0</b>	233	17.1	235	17.0	16	<b>234</b>	<b>17.0</b>	233	17.1	235	17.0
605.mcf_s	16	<b>169</b>	<b>27.9</b>	170	27.8	168	28.1	1	161	29.2	161	29.3	<b>161</b>	<b>29.3</b>
620.omnetpp_s	16	118	13.8	<b>117</b>	<b>13.9</b>	117	13.9	16	118	13.8	<b>117</b>	<b>13.9</b>	117	13.9
623.xalancbmk_s	16	53.1	26.7	53.4	26.5	<b>53.2</b>	<b>26.6</b>	1	<b>48.5</b>	<b>29.2</b>	48.7	29.1	48.3	29.4
625.x264_s	16	62.0	28.5	62.2	28.3	<b>62.0</b>	<b>28.4</b>	16	62.0	28.5	62.2	28.3	<b>62.0</b>	<b>28.4</b>
631.deepsjeng_s	16	177	8.10	177	8.12	<b>177</b>	<b>8.10</b>	16	177	8.10	177	8.12	<b>177</b>	<b>8.10</b>
641.leela_s	16	263	6.48	<b>264</b>	<b>6.47</b>	264	6.47	1	<b>261</b>	<b>6.53</b>	262	6.51	261	6.53
648.exchange2_s	16	82.4	35.7	<b>82.4</b>	<b>35.7</b>	82.1	35.8	16	82.4	35.7	<b>82.4</b>	<b>35.7</b>	82.1	35.8
657.xz_s	16	<b>261</b>	<b>23.7</b>	261	23.7	261	23.7	32	247	25.0	248	25.0	<b>247</b>	<b>25.0</b>

SPECspeed®2017\_int\_base = **17.4**

SPECspeed®2017\_int\_peak = **17.7**

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.

cpupower set to performance mode  
cpupower frequency-set -r -g performance  
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 Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SD535 V3  
(2.60 GHz, AMD EPYC 9115)

SPECspeed®2017\_int\_base = 17.4

SPECspeed®2017\_int\_peak = 17.7

**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology

**Test Date:** Feb-2025  
**Hardware Availability:** Feb-2025  
**Software Availability:** Oct-2024

### Environment Variables Notes

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

```
GOMP_CPU_AFFINITY = "0-31"
LD_LIBRARY_PATH =
  "/home/cpu2017-1.1.9-amd-aocc500_znver5_A1.2/amd_speed_aocc500_znver5_A_lib/lib:/home/cpu2017-1.1.9-amd-aocc500_znver5_A1.2/amd_speed_aocc500_znver5_A_lib/lib32:"
LIBOMP_NUM_HIDDEN_HELPER_THREADS = "0"
MALLOC_CONF = "retain:true"
OMP_DYNAMIC = "false"
OMP_SCHEDULE = "static"
OMP_STACKSIZE = "128M"
OMP_THREAD_LIMIT = "32"
```

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

```
GOMP_CPU_AFFINITY = "0"
```

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

```
GOMP_CPU_AFFINITY = "0"
```

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

```
GOMP_CPU_AFFINITY = "0"
```

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

```
GOMP_CPU_AFFINITY = "0"
```

Environment variables set by runcpu during the 657.xz\_s peak run:

```
GOMP_CPU_AFFINITY = "0-31"
```

### General Notes

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

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.

### Platform Notes

BIOS configuration:

Choose Operating Mode set to Maximum Performance and then set it to Custom Mode  
NUMA Nodes per Socket set to NPS2  
P-State set to Enabled

```
Sysinfo program /home/cpu2017-1.1.9-amd-aocc500_znver5_A1.2/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on localhost.localdomain Mon Mar 18 10:51:52 2024
```

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

-----  
Table of contents  
-----

1. uname -a
2. w

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

SPECspeed®2017\_int\_base = 17.4

ThinkSystem SD535 V3  
(2.60 GHz, AMD EPYC 9115)

SPECspeed®2017\_int\_peak = 17.7

**CPU2017 License:** 9017

**Test Sponsor:** Lenovo Global Technology

**Tested by:** Lenovo Global Technology

**Test Date:** Feb-2025

**Hardware Availability:** Feb-2025

**Software Availability:** Oct-2024

### Platform Notes (Continued)

- 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 252 (252-32.e19\_4)
- 12. Services, from systemctl list-unit-files
- 13. Linux kernel boot-time arguments, from /proc/cmdline
- 14. cpupower frequency-info
- 15. sysctl
- 16. /sys/kernel/mm/transparent\_hugepage
- 17. /sys/kernel/mm/transparent\_hugepage/khugepaged
- 18. OS release
- 19. Disk information
- 20. /sys/devices/virtual/dmi/id
- 21. dmidecode
- 22. BIOS

```
-----
1. uname -a
Linux localhost.localdomain 5.14.0-427.13.1.el9_4.x86_64 #1 SMP PREEMPT_DYNAMIC Wed Apr 10 10:29:16 EDT
2024 x86_64 x86_64 x86_64 GNU/Linux
```

```
-----
2. w
10:51:52 up 2:51, 0 users, load average: 2.99, 4.97, 3.41
USER      TTY      LOGIN@  IDLE   JCPU   PCPU   WHAT
```

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

```
-----
4. ulimit -a
real-time non-blocking time (microseconds, -R) unlimited
core file size (blocks, -c) 0
data seg size (kbytes, -d) unlimited
scheduling priority (-e) 0
file size (blocks, -f) unlimited
pending signals (-i) 1546072
max locked memory (kbytes, -l) 2097152
max memory size (kbytes, -m) unlimited
open files (-n) 1024
pipe size (512 bytes, -p) 8
POSIX message queues (bytes, -q) 819200
real-time priority (-r) 0
stack size (kbytes, -s) unlimited
cpu time (seconds, -t) unlimited
max user processes (-u) 1546072
virtual memory (kbytes, -v) unlimited
file locks (-x) unlimited
```

```
-----
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize 31
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SD535 V3  
(2.60 GHz, AMD EPYC 9115)

SPECspeed®2017\_int\_base = 17.4

SPECspeed®2017\_int\_peak = 17.7

**CPU2017 License:** 9017

**Test Sponsor:** Lenovo Global Technology

**Tested by:** Lenovo Global Technology

**Test Date:** Feb-2025

**Hardware Availability:** Feb-2025

**Software Availability:** Oct-2024

### Platform Notes (Continued)

```

sshd: root [priv]
sshd: root@notty
/bin/bash ./02.remote_local_SPECCpu_1.01.sh
/bin/bash ./Run035-compliant-amd-speedint.sh
python3 ./run_amd_speed_aocc500_znver5_A1.py
/bin/bash ./amd_speed_aocc500_znver5_A1.sh
runcpu --config amd_speed_aocc500_znver5_A1.cfg --tune all --reportable --iterations 3 intspeed
runcpu --configfile amd_speed_aocc500_znver5_A1.cfg --tune all --reportable --iterations 3 --nopower
--runmode speed --tune base:peak --size test:train:refspeed intspeed --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.061/templogs/preenv.intspeed.061.0.log --lognum 061.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017-1.1.9-amd-aocc500_znver5_A1.2

```

6. /proc/cpuinfo

```

model name      : AMD EPYC 9115 16-Core Processor
vendor_id      : AuthenticAMD
cpu family      : 26
model           : 2
stepping        : 1
microcode       : 0xb00211a
bugs            : sysret_ss_attrs spectre_v1 spectre_v2 spec_store_bypass
TLB size        : 192 4K pages
cpu cores       : 16
siblings        : 32
1 physical ids (chips)
32 processors (hardware threads)
physical id 0: core ids 0-15
physical id 0: apicids 0-31

```

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 2.37.4:

```

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):                32
On-line CPU(s) list:  0-31
Vendor ID:             AuthenticAMD
BIOS Vendor ID:       Advanced Micro Devices, Inc.
Model name:            AMD EPYC 9115 16-Core Processor
BIOS Model name:      AMD EPYC 9115 16-Core Processor
CPU family:            26
Model:                 2
Thread(s) per core:   2
Core(s) per socket:   16
Socket(s):             1
Stepping:              1
Frequency boost:       enabled
CPU(s) scaling MHz:   100%
CPU max MHz:           2600.0000
CPU min MHz:           1500.0000
BogoMIPS:              5192.08
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

```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

SPECspeed®2017\_int\_base = 17.4

ThinkSystem SD535 V3  
(2.60 GHz, AMD EPYC 9115)

SPECspeed®2017\_int\_peak = 17.7

CPU2017 License: 9017

Test Date: Feb-2025

Test Sponsor: Lenovo Global Technology

Hardware Availability: Feb-2025

Tested by: Lenovo Global Technology

Software Availability: Oct-2024

### Platform Notes (Continued)

```

aperfmpperf rapl pni pclmulqdq monitor sse3 fma cx16 pcid sse4_1 sse4_2
x2apic movbe popcnt aes xsave avx fl16c rdrand lahf_lm cmp_legacy svm
extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch osvw ibs skinit
wdt tce topoext perfctr_core perfctr_nb bpeext 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 erms
invpcid cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma
clflushopt clwb avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec
xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
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 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 fsrm
avx512_vp2intersect flush_llld debug_swap

```

```

Virtualization: AMD-V
L1d cache: 768 KiB (16 instances)
L1i cache: 512 KiB (16 instances)
L2 cache: 16 MiB (16 instances)
L3 cache: 64 MiB (2 instances)
NUMA node(s): 2
NUMA node0 CPU(s): 0-7,16-23
NUMA node1 CPU(s): 8-15,24-31
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 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, PBRSE-eIBRS 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	768K	12	Data	1	64	1	64
L1i	32K	512K	8	Instruction	1	64	1	64
L2	1M	16M	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: 0-7,16-23
node 0 size: 193074 MB
node 0 free: 192602 MB
node 1 cpus: 8-15,24-31
node 1 size: 193482 MB
node 1 free: 192860 MB
node distances:
node 0 1
0: 10 12
1: 12 10

```

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SD535 V3  
(2.60 GHz, AMD EPYC 9115)

SPECspeed®2017\_int\_base = 17.4

SPECspeed®2017\_int\_peak = 17.7

**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology

**Test Date:** Feb-2025  
**Hardware Availability:** Feb-2025  
**Software Availability:** Oct-2024

### Platform Notes (Continued)

9. /proc/meminfo  
MemTotal: 395834648 kB

10. who -r  
run-level 3 Mar 18 08:00

11. Systemd service manager version: systemd 252 (252-32.el9\_4)  
Default Target Status  
multi-user running

12. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	NetworkManager NetworkManager-dispatcher NetworkManager-wait-online auditd chronyd crond dbus-broker getty@ insights-client-boot irqbalance kdump low-memory-monitor mdmonitor microcode nis-domainname nvme-fc-boot-connections rhsmcertd rsyslog rtkit-daemon selinux-autorelabel-mark sshd sssd systemd-boot-update systemd-network-generator udisks2 upower
enabled-runtime	systemd-remount-fs
disabled	canberra-system-bootup canberra-system-shutdown canberra-system-shutdown-reboot chrony-wait chronyd-restricted console-getty cpupower debug-shell dnf-system-upgrade firewalld kvm_stat man-db-restart-cache-update nftables nvmmf-autoconnect pesign rdisc rhcd rhsm rhsm-facts rpmbd-rebuild selinux-check-proper-disable serial-getty@ sshd-keygen@ systemd-boot-check-no-failures systemd-pstore systemd-sysext
indirect	sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo systemd-sysupdate systemd-sysupdate-reboot

13. Linux kernel boot-time arguments, from /proc/cmdline  
BOOT\_IMAGE=(hd3,gpt2)/boot/vmlinuz-5.14.0-427.13.1.el9\_4.x86\_64  
root=UUID=609e1264-f568-475c-b502-9e0795850886  
ro  
resume=UUID=7f8ee8bf-b24d-4aea-9bd8-e670d4778be8

14. cpupower frequency-info  
analyzing CPU 24:  
current policy: frequency should be within 1.50 GHz and 2.60 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: 800MHz

15. 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

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SD535 V3  
(2.60 GHz, AMD EPYC 9115)

SPECspeed®2017\_int\_base = 17.4

SPECspeed®2017\_int\_peak = 17.7

**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology

**Test Date:** Feb-2025  
**Hardware Availability:** Feb-2025  
**Software Availability:** Oct-2024

### Platform Notes (Continued)

```

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

```

```

-----
16. /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

```

```

-----
17. /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

```

```

-----
18. OS release
From /etc/*-release /etc/*-version
os-release      Red Hat Enterprise Linux 9.4 (Plow)
redhat-release Red Hat Enterprise Linux release 9.4 (Plow)
system-release Red Hat Enterprise Linux release 9.4 (Plow)

```

```

-----
19. Disk information
SPEC is set to: /home/cpu2017-1.1.9-amd-aocc500_zenver5_A1.2
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/nvme0n1p4  xfs   820G  39G  782G  5% /home

```

```

-----
20. /sys/devices/virtual/dmi/id
Vendor:      Lenovo
Product:     ThinkSystem SD535 V3
Product Family: ThinkSystem
Serial:      1234567890

```

```

-----
21. 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 Samsung M321R4GA3PB2-CCPEC 32 GB 2 rank 6400, configured at 6000

```

(Continued on next page)





# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SD535 V3  
(2.60 GHz, AMD EPYC 9115)

SPECspeed®2017\_int\_base = 17.4

SPECspeed®2017\_int\_peak = 17.7

**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology

**Test Date:** Feb-2025  
**Hardware Availability:** Feb-2025  
**Software Availability:** Oct-2024

### Platform Notes (Continued)

-----  
22. BIOS  
(This section combines info from /sys/devices and dmidecode.)  
BIOS Vendor: Lenovo  
BIOS Version: GPE113I-4.10  
BIOS Date: 12/12/2024  
BIOS Revision: 4.10  
Firmware Revision: 5.10

### Compiler Version Notes

-----  
C | 600.perlbench\_s(base, peak) 602.gcc\_s(base, peak) 605.mcf\_s(base, peak) 625.x264\_s(base, peak)  
657.xz\_s(base, peak)

-----  
AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#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++ | 620.omnetpp\_s(base, peak) 623.xalancbmk\_s(base, peak) 631.deepsjeng\_s(base, peak)  
641.leela\_s(base, peak)

-----  
AMD clang version 17.0.6 (CLANG: AOCC\_5.0.0-Build#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 | 648.exchange2\_s(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 Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

SPECspeed®2017\_int\_base = 17.4

ThinkSystem SD535 V3  
(2.60 GHz, AMD EPYC 9115)

SPECspeed®2017\_int\_peak = 17.7

**CPU2017 License:** 9017

**Test Sponsor:** Lenovo Global Technology

**Tested by:** Lenovo Global Technology

**Test Date:** Feb-2025

**Hardware Availability:** Feb-2025

**Software Availability:** Oct-2024

## Base Portability Flags

```

600.perlbench_s: -DSPEC_LINUX_X64 -DSPEC_LP64
602.gcc_s: -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.omnetpp_s: -DSPEC_LP64
623.xalancbmk_s: -DSPEC_LINUX -DSPEC_LP64
625.x264_s: -DSPEC_LP64
631.deepsjeng_s: -DSPEC_LP64
641.leela_s: -DSPEC_LP64
648.exchange2_s: -DSPEC_LP64
657.xz_s: -DSPEC_LP64

```

## Base Optimization Flags

### C benchmarks:

```

-m64 -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-allow-multiple-definition -Wl,-mllvm -Wl,-extra-inliner -O3
-march=znver5 -fveclib=AMDLIBM -ffast-math -fopenmp -DSPEC_OPENMP
-flto -fremap-arrays -fstrip-mining -fstruct-layout=7
-mllvm -inline-threshold=1000 -mllvm -reduce-array-computations=3
-mllvm -unroll-threshold=50 -zopt -fopenmp=libomp -lomp -lamdlibm
-lflang -lamdalloc

```

### C++ benchmarks:

```

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

```

### Fortran benchmarks:

```

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

```



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SD535 V3  
(2.60 GHz, AMD EPYC 9115)

SPECspeed®2017\_int\_base = 17.4

SPECspeed®2017\_int\_peak = 17.7

**CPU2017 License:** 9017

**Test Sponsor:** Lenovo Global Technology

**Tested by:** Lenovo Global Technology

**Test Date:** Feb-2025

**Hardware Availability:** Feb-2025

**Software Availability:** Oct-2024

## Base Other Flags

C benchmarks:

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

C++ benchmarks:

-Wno-unused-command-line-argument

Fortran benchmarks:

-Wno-unused-command-line-argument

## Peak Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

Fortran benchmarks:

flang

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

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

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Lenovo Global Technology

SPECspeed®2017\_int\_base = 17.4

ThinkSystem SD535 V3  
(2.60 GHz, AMD EPYC 9115)

SPECspeed®2017\_int\_peak = 17.7

CPU2017 License: 9017

Test Date: Feb-2025

Test Sponsor: Lenovo Global Technology

Hardware Availability: Feb-2025

Tested by: Lenovo Global Technology

Software Availability: Oct-2024

## Peak Optimization Flags (Continued)

602.gcc\_s: basepeak = yes

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

625.x264\_s: basepeak = yes

657.xz\_s: Same as 600.perlbench\_s

C++ benchmarks:

620.omnetpp\_s: basepeak = yes

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

631.deepsjeng\_s: basepeak = yes

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

Fortran benchmarks:

648.exchange2\_s: basepeak = yes



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

## Lenovo Global Technology

ThinkSystem SD535 V3  
(2.60 GHz, AMD EPYC 9115)

SPECspeed®2017\_int\_base = 17.4

SPECspeed®2017\_int\_peak = 17.7

**CPU2017 License:** 9017

**Test Sponsor:** Lenovo Global Technology

**Tested by:** Lenovo Global Technology

**Test Date:** Feb-2025

**Hardware Availability:** Feb-2025

**Software Availability:** Oct-2024

## Peak Other Flags

C benchmarks:

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

C++ benchmarks:

-Wno-unused-command-line-argument

Fortran benchmarks:

-Wno-unused-command-line-argument

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

<http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-Turin-E.html>

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

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-Turin-E.xml>

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

SPEC CPU and SPECspeed 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 2024-03-17 22:51:51-0400.

Report generated on 2025-03-12 10:27:04 by CPU2017 PDF formatter v6716.

Originally published on 2025-03-11.