



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

**Lenovo Global Technology**  
**ThinkSystem SR850 V4**  
**(2.0 GHZ, Intel Xeon 6788P)**

SPECrate®2017\_int\_base = 2790

SPECrate®2017\_int\_energy\_base = 1490

SPECrate®2017\_int\_peak = Not Run

SPECrate®2017\_int\_energy\_peak = Not Run

CPU2017 License: 9017

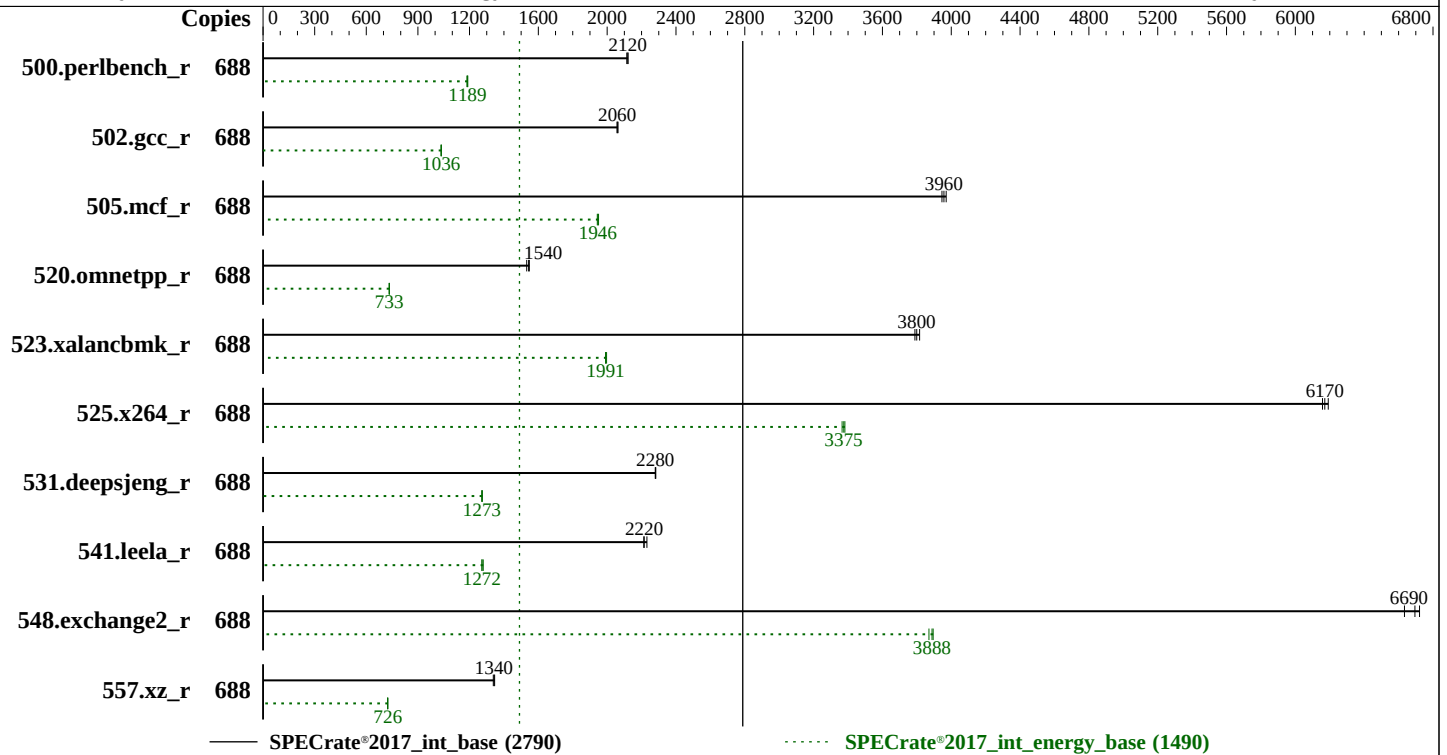
Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Sep-2025

Hardware Availability: Nov-2025

Software Availability: Jun-2025



## Hardware

CPU Name: Intel Xeon 6788P  
Max MHz: 3800  
Nominal: 2000  
Enabled: 344 cores, 4 chips, 2 threads/core  
Orderable: 2,4 chips  
Cache L1: 64 KB I + 48 KB D on chip per core  
L2: 2 MB I+D on chip per core  
L3: 336 MB I+D on chip per chip  
Other: None  
Memory: 2 TB (32 x 64 GB 2Rx4 PC5-6400B-R)  
Storage: 1 x 960 GB M.2 NVMe SSD  
Other: CPU Cooling: Air

## Software

OS: SUSE Linux Enterprise Server 15 SP7  
Kernel 6.4.0-150700.51-default  
Compiler: C/C++: Version 2024.1 of Intel oneAPI DPC++/C++ Compiler for Linux;  
Fortran: Version 2024.1 of Intel Fortran Compiler for Linux;  
Parallel: No  
Firmware: BIOS Version RVE103X 1.10 released Jul-2025  
File System: xfs  
System State: Run level 3 (multi-user)  
Base Pointers: 64-bit  
Peak Pointers: Not Applicable  
Other: None  
Power Management: BIOS set to balance power and performance

## Power

Max. Power (W): 2326.6  
Idle Power (W): 454.96  
Min. Temperature (C): 22.31  
Elevation (m): 43  
Line Standard: 220 V / 50 Hz / 1 phase / 3 wires  
Provisioning: Line-powered



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

**Lenovo Global Technology**  
**ThinkSystem SR850 V4**  
**(2.0 GHZ, Intel Xeon 6788P)**

SPECrate®2017\_int\_base = 2790  
 SPECrate®2017\_int\_energy\_base = 1490  
 SPECrate®2017\_int\_peak = Not Run  
 SPECrate®2017\_int\_energy\_peak = Not Run

**CPU2017 License:** 9017

**Test Sponsor:** Lenovo Global Technology

**Tested by:** Lenovo Global Technology

**Test Date:** Sep-2025

**Hardware Availability:** Nov-2025

**Software Availability:** Jun-2025

## Power Settings

Management FW: Version 1.42 of IHX417R  
 Memory Mode: Normal

## Power-Relevant Hardware

Power Supply: 2 x 2700 W (redundant)  
 Details: ThinkSystem 2700W 230V Platinum CRPS Hot-Swap Power Supply v2.3 4P57A89308  
 Backplane: M.2 SATA/NVMe Drive Assembly Kit  
 Other Storage: None  
 Storage Model #: 4XB7A13999  
 NICs Installed: 1 x ThinkSystem Ethernet 2-port Adaptor @ 10 Gb  
 NICs Enabled (FW/OS): 2 / 1  
 NICs Connected/Speed: 1 @ 10 Gb  
 Other HW Model #: 6 x Performance fans

## Power Analyzer

Power Analyzer: WIN:9888  
 Hardware Vendor: YOKOGAWA, Inc.  
 Model: YokogawaWT310E  
 Serial Number: C3SH31009E  
 Input Connection: Default  
 Metrology Institute: CNAS  
 Calibration By: CEPREI Calibration and Testing Center  
 Calibration Label: 1GA24011968-0005  
 Calibration Date: 27-Sep-2024  
 PTDaemon® Version: 1.10.0 (82175bac; 2022-08-17)  
 Setup Description: Connected to PSU1  
 Current Ranges Used: 10A  
 Voltage Range Used: 300V

## Temperature Meter

Temperature Meter: WIN:9889  
 Hardware Vendor: Digi International, Inc.  
 Model: DigiWATCHPORT\_H  
 Serial Number: W63181846  
 Input Connection: USB  
 PTDaemon Version: 1.10.0 (82175bac; 2022-08-17)  
 Setup Description: 50 mm in front of SUT main intake

## Base Results Table

| Benchmark       | Copies | Seconds    | Ratio       | Energy (kJ) | Energy Ratio | Average Power | Maximum Power | Seconds    | Ratio       | Energy (kJ) | Energy Ratio | Average Power | Maximum Power | Seconds    | Ratio       | Energy (kJ) | Energy Ratio | Average Power | Maximum Power |
|-----------------|--------|------------|-------------|-------------|--------------|---------------|---------------|------------|-------------|-------------|--------------|---------------|---------------|------------|-------------|-------------|--------------|---------------|---------------|
| 500.perlbench_r | 688    | 516        | 2120        | 999         | 1190         | 1940          | 2110          | 518        | 2110        | 1000        | 1180         | 1940          | 2110          | <u>517</u> | <u>2120</u> | <u>999</u>  | <u>1190</u>  | <u>1930</u>   | <u>2080</u>   |
| 502 gcc_r       | 688    | 473        | 2060        | 1020        | 1040         | 2160          | 2320          | 472        | 2060        | 1020        | 1040         | 2160          | 2320          | <u>473</u> | <u>2060</u> | <u>1020</u> | <u>1040</u>  | <u>2160</u>   | <u>2320</u>   |
| 505.mcf_r       | 688    | <u>281</u> | <u>3960</u> | <u>625</u>  | <u>1950</u>  | <u>2220</u>   | <u>2310</u>   | 282        | 3950        | 626         | 1940         | 2220          | 2320          | 280        | 3970        | 624         | 1950         | 2230          | 2320          |
| 520.omnetpp_r   | 688    | <u>585</u> | <u>1540</u> | <u>1330</u> | <u>733</u>   | <u>2280</u>   | <u>2330</u>   | 583        | 1550        | 1330        | 734          | 2280          | 2310          | 589        | 1530        | 1330        | 734          | 2260          | 2310          |
| 523.xalancbmk_r | 688    | <u>191</u> | <u>3800</u> | <u>395</u>  | <u>1990</u>  | <u>2070</u>   | <u>2240</u>   | 192        | 3790        | 395         | 1990         | 2060          | 2240          | 190        | 3820        | 394         | 2000         | 2070          | 2240          |
| 525.x264_r      | 688    | 196        | 6160        | 388         | 3370         | 1980          | 2270          | <u>195</u> | <u>6170</u> | <u>387</u>  | <u>3380</u>  | <u>1980</u>   | <u>2280</u>   | 195        | 6190        | 386         | 3380         | 1980          | 2280          |
| 531.deepsjeng_r | 688    | <u>346</u> | <u>2280</u> | <u>673</u>  | <u>1270</u>  | <u>1950</u>   | <u>2190</u>   | 346        | 2280        | 674         | 1270         | 1950          | 2130          | 345        | 2280        | 673         | 1270         | 1950          | 2130          |
| 541.leela_r     | 688    | <u>514</u> | <u>2220</u> | <u>969</u>  | <u>1270</u>  | <u>1880</u>   | <u>2050</u>   | 515        | 2210        | 969         | 1270         | 1880          | 2040          | 511        | 2230        | 963         | 1280         | 1890          | 2040          |
| 548.exchange2_r | 688    | 272        | 6630        | 505         | 3870         | 1860          | 2050          | 268        | 6720        | 502         | 3890         | 1870          | 2050          | <u>269</u> | <u>6690</u> | <u>503</u>  | <u>3890</u>  | <u>1870</u>   | <u>2050</u>   |
| 557.xz_r        | 688    | 552        | 1350        | 1120        | 724          | 2020          | 2240          | 555        | 1340        | 1120        | 723          | 2010          | 2250          | <u>553</u> | <u>1340</u> | <u>1110</u> | <u>726</u>   | <u>2010</u>   | <u>2250</u>   |

SPECrate®2017\_int\_base = 2790

SPECrate®2017\_int\_energy\_base = 1490

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Lenovo Global Technology  
ThinkSystem SR850 V4  
(2.0 GHZ, Intel Xeon 6788P)

SPECrate®2017\_int\_base = 2790  
SPECrate®2017\_int\_energy\_base = 1490  
SPECrate®2017\_int\_peak = Not Run  
SPECrate®2017\_int\_energy\_peak = Not Run

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Sep-2025

Hardware Availability: Nov-2025

Software Availability: Jun-2025

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

## Environment Variables Notes

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

LD\_LIBRARY\_PATH =

"/home/cpu2017-1.1.9-ic2024.1/lib/intel64:/home/cpu2017-1.1.9-ic2024.1/lib/ia32:/home/cpu2017-1.1.9-ic2024.1/je5.0.1-32"

MALLOC\_CONF = "retain:true"

## General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM  
memory using Red Hat Enterprise Linux 8.4

Transparent Huge Pages enabled by default

Prior to runcpu invocation

Filesystem page cache synced and cleared with:

sync; echo 3> /proc/sys/vm/drop\_caches

runcpu command invoked through numactl i.e.:

numactl --interleave=all runcpu <etc>

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:

Workload Profile set to Custom

SNC set to Enabled

DCU Streamer Prefetcher set to Disabled

XPT Prefetcher set to Disabled

Sysinfo program /home/cpu2017-1.1.9-ic2024.1/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on localhost Sat Sep 6 09:55:01 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

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Lenovo Global Technology  
ThinkSystem SR850 V4  
(2.0 GHZ, Intel Xeon 6788P)

SPECrate®2017\_int\_base = 2790

SPECrate®2017\_int\_energy\_base = 1490

SPECrate®2017\_int\_peak = Not Run

SPECrate®2017\_int\_energy\_peak = Not Run

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Sep-2025

Hardware Availability: Nov-2025

Software Availability: Jun-2025

## Platform Notes (Continued)

```
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 254 (254.24+suse.148.g83b9060b6e)
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 6.4.0-150700.51-default #1 SMP PREEMPT_DYNAMIC Wed Apr 30 21:35:43 UTC 2025 (6930611)
x86_64 x86_64 x86_64 GNU/Linux
-----

2. w
09:55:01 up 6 min, 1 user, load average: 1.67, 5.82, 3.20
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU WHAT
-----

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

4. ulimit -a
core file size          (blocks, -c) unlimited
data seg size           (kbytes, -d) unlimited
scheduling priority     (-e) 0
file size               (blocks, -f) unlimited
pending signals         (-i) 8253538
max locked memory       (kbytes, -l) 8192
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) 8253538
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited
-----

5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize=42
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: root [priv]
sshd: root@notty
/bin/bash ./02.remote_local_SPECcpu_1.01.sh
sh Run502-compliant-ic2024.1-lin-sapphirerapids-rateint-base-smt-on-20240308.sh
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Lenovo Global Technology  
ThinkSystem SR850 V4  
(2.0 GHZ, Intel Xeon 6788P)

SPECrate®2017\_int\_base = 2790  
SPECrate®2017\_int\_energy\_base = 1490  
SPECrate®2017\_int\_peak = Not Run  
SPECrate®2017\_int\_energy\_peak = Not Run

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Sep-2025

Hardware Availability: Nov-2025

Software Availability: Jun-2025

## Platform Notes (Continued)

```
runcpu --power --nobuild --action validate --define default-platform-flags --define numcopies=688 -c
ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=344 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base -o all intrate
runcpu --power --nobuild --action validate --define default-platform-flags --define numcopies=688
--configfile ic2024.1-lin-sapphirerapids-rate-20240308.cfg --define smt-on --define cores=344 --define
physicalfirst --define invoke_with_interleave --define drop_caches --tune base --output_format all
--runmode rate --tune base --size refrate intrate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.124/templogs/preenv.intrate.124.0.log --lognum 124.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017-1.1.9-ic2024.1
```

```
-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6788P
vendor_id      : GenuineIntel
cpu family     : 6
model          : 173
stepping       : 1
microcode      : 0x10003d0
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
cpu cores      : 86
siblings       : 172
4 physical ids (chips)
688 processors (hardware threads)
physical id 0: core ids 0-42,64-106
physical id 1: core ids 0-42,64-106
physical id 2: core ids 0-42,64-106
physical id 3: core ids 0-42,64-106
physical id 0: apicids 0-85,128-213
physical id 1: apicids 256-341,384-469
physical id 2: apicids 512-597,640-725
physical id 3: apicids 768-853,896-981
```

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 2.40.4:

```
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):                688
On-line CPU(s) list:   0-687
Vendor ID:             GenuineIntel
Model name:            Intel(R) Xeon(R) 6788P
CPU family:            6
Model:                 173
Thread(s) per core:    2
Core(s) per socket:    86
Socket(s):             4
Stepping:              1
BogoMIPS:              4000.00
Flags:                 fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
                      pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx
                      pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Lenovo Global Technology  
ThinkSystem SR850 V4  
(2.0 GHZ, Intel Xeon 6788P)

SPECrate®2017\_int\_base = 2790

SPECrate®2017\_int\_energy\_base = 1490

SPECrate®2017\_int\_peak = Not Run

SPECrate®2017\_int\_energy\_peak = Not Run

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Sep-2025

Hardware Availability: Nov-2025

Software Availability: Jun-2025

## Platform Notes (Continued)

nopl xtopology nonstop\_tsc cpuid aperfmperf tsc\_known\_freq pni  
pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16  
xtpr pdcm pcid dca sse4\_1 sse4\_2 x2apic movbe popcnt  
tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm  
3dnowprefetch cpuid\_fault epb cat\_l3 cat\_l2 cdp\_l3 intel\_ppin cdp\_l2  
ssbd mba ibrs ibpb stibp ibrs\_enhanced tpr\_shadow flexpriority ept  
vpid ept\_ad fsgsbase tsc\_adjust bmi1 avx2 smep bmi2 erms invpcid cqm  
rdt\_a avx512f avx512dq rdseed adx smap avx512ifma clflushopt clwb  
intel\_pt avx512cd sha\_ni avx512bw avx512vl xsaveopt xsavec xgetbv1  
xsaves cqm\_llc cqm\_occup\_llc cqm\_mbm\_total cqm\_mbm\_local  
split\_lock\_detect user\_shstk avx\_vnni avx512\_bf16 wbnoinvd dtherm ida  
arat pln pts vnni avx512vbmi umip pku ospke waitpkg avx512\_vbmi2 gfni  
vaes vpclmulqdq avx512\_vnni avx512\_bitalg tme avx512\_vpopcntdq la57  
rdrpid bus\_lock\_detect cldemote movdiri movdir64b enqcmd fsrm md\_clear  
serialize tsxldtrk pconfig arch\_lbr ibt amx\_bf16 avx512\_fp16 amx\_tile  
amx\_int8 flush\_l1d arch\_capabilities

Virtualization:

L1d cache: 16.1 MiB (344 instances)

L1i cache: 21.5 MiB (344 instances)

L2 cache: 688 MiB (344 instances)

L3 cache: 1.3 GiB (4 instances)

NUMA node(s): 8

NUMA node0 CPU(s): 0-42, 344-386

NUMA node1 CPU(s): 43-85, 387-429

NUMA node2 CPU(s): 86-128, 430-472

NUMA node3 CPU(s): 129-171, 473-515

NUMA node4 CPU(s): 172-214, 516-558

NUMA node5 CPU(s): 215-257, 559-601

NUMA node6 CPU(s): 258-300, 602-644

NUMA node7 CPU(s): 301-343, 645-687

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; RSB filling; PBRSE-eIBRS Not affected; BHI BHI\_DIS\_S

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      | 16.1M    | 12   | Data        | 1     | 64     | 1        | 64             |
| L1i  | 64K      | 21.5M    | 16   | Instruction | 1     | 64     | 1        | 64             |
| L2   | 2M       | 688M     | 16   | Unified     | 2     | 2048   | 1        | 64             |
| L3   | 336M     | 1.3G     | 16   | Unified     | 3     | 344064 | 1        | 64             |

8. numactl --hardware

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

available: 8 nodes (0-7)

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Lenovo Global Technology  
ThinkSystem SR850 V4  
(2.0 GHZ, Intel Xeon 6788P)

SPECrate®2017\_int\_base = 2790

SPECrate®2017\_int\_energy\_base = 1490

SPECrate®2017\_int\_peak = Not Run

SPECrate®2017\_int\_energy\_peak = Not Run

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Sep-2025

Hardware Availability: Nov-2025

Software Availability: Jun-2025

## Platform Notes (Continued)

```
node 0 cpus: 0-42,344-386
node 0 size: 257434 MB
node 0 free: 256370 MB
node 1 cpus: 43-85,387-429
node 1 size: 257986 MB
node 1 free: 257114 MB
node 2 cpus: 86-128,430-472
node 2 size: 258025 MB
node 2 free: 257177 MB
node 3 cpus: 129-171,473-515
node 3 size: 258025 MB
node 3 free: 257144 MB
node 4 cpus: 172-214,516-558
node 4 size: 258025 MB
node 4 free: 257101 MB
node 5 cpus: 215-257,559-601
node 5 size: 258025 MB
node 5 free: 257060 MB
node 6 cpus: 258-300,602-644
node 6 size: 258025 MB
node 6 free: 257086 MB
node 7 cpus: 301-343,645-687
node 7 size: 257865 MB
node 7 free: 256989 MB
node distances:
node  0  1  2  3  4  5  6  7
  0: 10 12 21 21 21 21 21 21
  1: 12 10 21 21 21 21 21 21
  2: 21 21 10 12 21 21 21 21
  3: 21 21 12 10 21 21 21 21
  4: 21 21 21 21 10 12 21 21
  5: 21 21 21 21 12 10 21 21
  6: 21 21 21 21 21 21 10 12
  7: 21 21 21 21 21 21 12 10
```

9. /proc/meminfo  
MemTotal: 2112933800 kB

10. who -r  
run-level 3 Sep 6 09:51

11. Systemd service manager version: systemd 254 (254.24+suse.148.g83b9060b6e)  
Default Target Status  
multi-user running

12. Services, from systemctl list-unit-files  
STATE UNIT FILES  
enabled YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron getty@ irqbalance issue-generator  
kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections nvmmf-autoconnect postfix  
purge-kernels rollback rsyslog smartd sshd systemd-pstore wicked wickedd-auto4  
wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny  
enabled-runtime systemd-remount-fs  
disabled autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait

(Continued on next page)





# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Lenovo Global Technology  
ThinkSystem SR850 V4  
(2.0 GHZ, Intel Xeon 6788P)

SPECrate®2017\_int\_base = 2790  
SPECrate®2017\_int\_energy\_base = 1490  
SPECrate®2017\_int\_peak = Not Run  
SPECrate®2017\_int\_energy\_peak = Not Run

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Sep-2025

Hardware Availability: Nov-2025

Software Availability: Jun-2025

## Platform Notes (Continued)

generated  
indirect

chronyd console-getty cups cups-browsed debug-shell ebtables exchange-bmc-os-info  
firewalld fsidd gpm grub2-once haveged ipmi ipmievd issue-add-ssh-keys kexec-load lunmask  
man-db-create multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd serial-getty@  
smartd\_generate\_opts snmpd snmptrapd systemd-boot-check-no-failures systemd-confext  
systemd-network-generator systemd-sysexit systemd-time-wait-sync systemd-timesyncd  
ntp\_sync  
systemd-userdbd wickedd

-----  
13. Linux kernel boot-time arguments, from /proc/cmdline  
BOOT\_IMAGE=/boot/vmlinuz-6.4.0-150700.51-default  
root=UUID=5caa0f87-5156-4d0e-b8a9-eafcf70a6b5a  
splash=silent  
mitigations=auto  
quiet  
security=apparmor  
-----

-----  
14. cpupower frequency-info  
analyzing CPU 231:  
Unable to determine current policy  
boost state support:  
Supported: yes  
Active: yes  
-----

-----  
15. sysctl  
kernel.numa\_balancing 1  
kernel.randomize\_va\_space 2  
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 20  
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 60  
vm.watermark\_boost\_factor 15000  
vm.watermark\_scale\_factor 10  
vm.zone\_reclaim\_mode 0  
-----

-----  
16. /sys/kernel/mm/transparent\_hugepage  
defrag always defer defer+madvice [madvice] never  
enabled [always] madvice 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  
-----

(Continued on next page)





# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Lenovo Global Technology  
ThinkSystem SR850 V4  
(2.0 GHZ, Intel Xeon 6788P)

SPECrate®2017\_int\_base = 2790

SPECrate®2017\_int\_energy\_base = 1490

SPECrate®2017\_int\_peak = Not Run

SPECrate®2017\_int\_energy\_peak = Not Run

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Sep-2025

Hardware Availability: Nov-2025

Software Availability: Jun-2025

## Platform Notes (Continued)

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 SUSE Linux Enterprise Server 15 SP7

-----  
19. Disk information  
SPEC is set to: /home/cpu2017-1.1.9-ic2024.1  
Filesystem Type Size Used Avail Use% Mounted on  
/dev/nvme0n1p3 xfs 890G 47G 843G 6% /

-----  
20. /sys/devices/virtual/dmi/id  
Vendor: Lenovo  
Product: ThinkSystem SR850 V4  
Product Family: ThinkSystem  
Serial: 9876543210

-----  
21. dmidecode  
Additional information from dmidecode 3.6 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:  
10x Samsung M321R8GA0PB2-CCPEC 64 GB 2 rank 6400  
5x Samsung M321R8GA0PB2-CCPKC 64 GB 2 rank 6400  
11x Samsung M321R8GA0PB2-CCPPC 64 GB 2 rank 6400  
6x Samsung M321R8GA0PB2-CCPWC 64 GB 2 rank 6400

-----  
22. BIOS  
(This section combines info from /sys/devices and dmidecode.)  
BIOS Vendor: Lenovo  
BIOS Version: RVE103X-1.10  
BIOS Date: 07/17/2025  
BIOS Revision: 1.10  
Firmware Revision: 1.42

## Compiler Version Notes

=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
=====

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Lenovo Global Technology  
ThinkSystem SR850 V4  
(2.0 GHZ, Intel Xeon 6788P)

SPECrate®2017\_int\_base = 2790

SPECrate®2017\_int\_energy\_base = 1490

SPECrate®2017\_int\_peak = Not Run

SPECrate®2017\_int\_energy\_peak = Not Run

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Sep-2025

Hardware Availability: Nov-2025

Software Availability: Jun-2025

## Compiler Version Notes (Continued)

=====  
C++ | 520.omnetpp\_r(base) 523.xalancbmk\_r(base) 531.deepsjeng\_r(base) 541.leela\_r(base)  
-----

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
-----

=====  
Fortran | 548.exchange2\_r(base)  
-----

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
-----

## Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

## Base Portability Flags

500.perlbench\_r: -DSPEC\_LP64 -DSPEC\_LINUX\_X64

502.gcc\_r: -DSPEC\_LP64

505.mcf\_r: -DSPEC\_LP64

520.omnetpp\_r: -DSPEC\_LP64

523.xalancbmk\_r: -DSPEC\_LP64 -DSPEC\_LINUX

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:

-w -std=c11 -m64 -wl, -z, muldefs -xsapphirerapids -O3 -ffast-math

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Lenovo Global Technology  
ThinkSystem SR850 V4  
(2.0 GHZ, Intel Xeon 6788P)

SPECrate®2017\_int\_base = 2790  
SPECrate®2017\_int\_energy\_base = 1490  
SPECrate®2017\_int\_peak = Not Run  
SPECrate®2017\_int\_energy\_peak = Not Run

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Sep-2025

Hardware Availability: Nov-2025

Software Availability: Jun-2025

## Base Optimization Flags (Continued)

C benchmarks (continued):

-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4  
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc

C++ benchmarks:

-w -std=c++14 -m64 -wl,-z,muldefs -xsapphirerapids -O3 -ffast-math  
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4  
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc

Fortran benchmarks:

-w -m64 -wl,-z,muldefs -xsapphirerapids -O3 -ffast-math -flto  
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4  
-nostandard-realloc-lhs -align array32byte -auto  
-L/opt/intel/oneapi/compiler/2024.1/lib -lqkmalloc

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-Birchstream-F.html>

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.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-Birchstream-F.xml>

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.xml>

PTDaemon, 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 2025-09-05 21:54:59-0400.

Report generated on 2025-09-23 16:56:01 by CPU2017 PDF formatter v6716.

Originally published on 2025-09-23.