



SPEC CPU®2017 Integer Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Lenovo Global Technology

ThinkSystem SR950 V3
(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 3810

SPECrate®2017_int_peak = Not Run

CPU2017 License: 9017

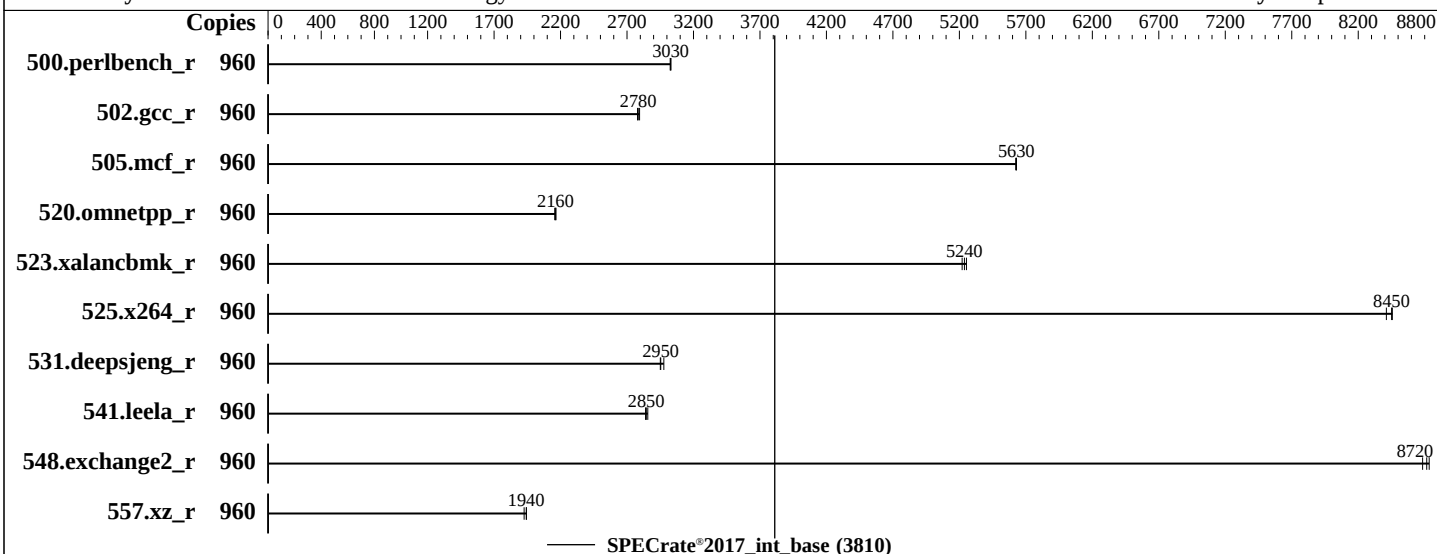
Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Jun-2026

Hardware Availability: Oct-2023

Software Availability: Apr-2026



Hardware

CPU Name: Intel Xeon Platinum 8490H
Max MHz: 3500
Nominal: 1900
Enabled: 480 cores, 8 chips, 2 threads/core
Orderable: 8 chips
Cache L1: 32 KB I + 48 KB D on chip per core
L2: 2 MB I+D on chip per core
L3: 112.5 MB I+D on chip per chip
Other: None
Memory: 4 TB (64 x 64 GB 2Rx4 PC5-4800B-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 2026.0 of Intel oneAPI DPC++/C++ Compiler for Linux;
Fortran: Version 2026.0 of Intel Fortran Compiler for Linux;
Parallel: No
Firmware: Lenovo BIOS Version EBE123G 7.50 released May-2026
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 prefer performance at the cost of additional power usage



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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	960	504	3030	505	3020	<u>505</u>	<u>3030</u>							
502.gcc_r	960	<u>488</u>	<u>2780</u>	486	2790	489	2780							
505.mcf_r	960	<u>276</u>	<u>5630</u>	276	5620	276	5630							
520.omnetpp_r	960	584	2160	<u>582</u>	<u>2160</u>	582	2170							
523.xalancbmk_r	960	193	5250	194	5220	<u>194</u>	<u>5240</u>							
525.x264_r	960	200	8410	199	8460	<u>199</u>	<u>8450</u>							
531.deepsjeng_r	960	373	2950	370	2980	<u>372</u>	<u>2950</u>							
541.leela_r	960	560	2840	<u>559</u>	<u>2850</u>	557	2860							
548.exchange2_r	960	290	8680	<u>289</u>	<u>8720</u>	288	8730							
557.xz_r	960	534	1940	<u>534</u>	<u>1940</u>	538	1930							

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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.

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-ic2026.0/lib/intel64:/home/cpu2017-1.1.9-ic2026.0/lib/ia32"
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.



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Platform Notes

BIOS configuration:

Choose Operating Mode set to Maximum Performance and then set it to Custom Mode

C-States set to Legacy

DCU Streamer Prefetcher set to Disabled

SNC set to SNC4

Misc set to Option4

Sysinfo program /home/cpu2017-1.1.9-ic2026.0/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on localhost Fri Jun 19 00:08:27 2026

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 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
00:08:28 up 4 min, 1 user, load average: 1.72, 7.67, 4.22
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

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Platform Notes (Continued)

```
pending signals          (-i) 16510495
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) 16510495
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.1.02.sh
sh Run502-compliant-ic2026.0-lin-sapphirerapids-rateint-base-smt-on-20260429.sh
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=960 -c
ic2026.0-lin-sapphirerapids-rate-20260429.cfg --define smt-on --define cores=480 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base -o all intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=960 --configfile
ic2026.0-lin-sapphirerapids-rate-20260429.cfg --define smt-on --define cores=480 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base --output_format all --nopower --runmode
rate --tune base --size refrate intrate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.037/templots/preenv.intrate.037.0.log --lognum 037.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017-1.1.9-ic2026.0
```

6. /proc/cpuinfo

```
model name      : Intel(R) Xeon(R) Platinum 8490H
vendor_id       : GenuineIntel
cpu family      : 6
model           : 143
stepping        : 8
microcode       : 0x2b000661
bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb bhi
cpu cores       : 60
siblings        : 120
8 physical ids (chips)
960 processors (hardware threads)
physical id 0:  core ids 0-59
physical id 1:  core ids 0-59
physical id 2:  core ids 0-59
physical id 3:  core ids 0-59
physical id 4:  core ids 0-59
physical id 5:  core ids 0-59
physical id 6:  core ids 0-59
physical id 7:  core ids 0-59
physical id 0:  apicids 0-119
physical id 1:  apicids 128-247
physical id 2:  apicids 256-375
physical id 3:  apicids 384-503
physical id 4:  apicids 512-631
physical id 5:  apicids 640-759
physical id 6:  apicids 768-887
```

(Continued on next page)



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Platform Notes (Continued)

physical id 7: apicids 896-1015

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:         46 bits physical, 57 bits virtual
Byte Order:            Little Endian
CPU(s):                960
On-line CPU(s) list:   0-959
Vendor ID:             GenuineIntel
Model name:            Intel(R) Xeon(R) Platinum 8490H
CPU family:            6
Model:                 143
Thread(s) per core:    2
Core(s) per socket:    60
Socket(s):              8
Stepping:              8
CPU(s) scaling MHz:    23%
CPU max MHz:           3500.0000
CPU min MHz:           800.0000
BogoMIPS:              3800.00
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
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 vnmi avx512vbmi umip pku ospke waitpkg avx512_vbmi2 gfni
vaes vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57
rpid 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:        VT-x
L1d cache:             22.5 MiB (480 instances)
L1i cache:             15 MiB (480 instances)
L2 cache:              960 MiB (480 instances)
L3 cache:              900 MiB (8 instances)
NUMA node(s):          32
NUMA node0 CPU(s):     0-14,480-494
NUMA node1 CPU(s):     15-29,495-509
NUMA node2 CPU(s):     30-44,510-524
NUMA node3 CPU(s):     45-59,525-539
NUMA node4 CPU(s):     60-74,540-554
NUMA node5 CPU(s):     75-89,555-569
NUMA node6 CPU(s):     90-104,570-584
NUMA node7 CPU(s):     105-119,585-599
NUMA node8 CPU(s):     120-134,600-614
```

(Continued on next page)



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Platform Notes (Continued)

NUMA node9 CPU(s): 135-149,615-629
NUMA node10 CPU(s): 150-164,630-644
NUMA node11 CPU(s): 165-179,645-659
NUMA node12 CPU(s): 180-194,660-674
NUMA node13 CPU(s): 195-209,675-689
NUMA node14 CPU(s): 210-224,690-704
NUMA node15 CPU(s): 225-239,705-719
NUMA node16 CPU(s): 240-254,720-734
NUMA node17 CPU(s): 255-269,735-749
NUMA node18 CPU(s): 270-284,750-764
NUMA node19 CPU(s): 285-299,765-779
NUMA node20 CPU(s): 300-314,780-794
NUMA node21 CPU(s): 315-329,795-809
NUMA node22 CPU(s): 330-344,810-824
NUMA node23 CPU(s): 345-359,825-839
NUMA node24 CPU(s): 360-374,840-854
NUMA node25 CPU(s): 375-389,855-869
NUMA node26 CPU(s): 390-404,870-884
NUMA node27 CPU(s): 405-419,885-899
NUMA node28 CPU(s): 420-434,900-914
NUMA node29 CPU(s): 435-449,915-929
NUMA node30 CPU(s): 450-464,930-944
NUMA node31 CPU(s): 465-479,945-959
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 SW sequence; 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	22.5M	12	Data	1	64	1	64
L1i	32K	15M	8	Instruction	1	64	1	64
L2	2M	960M	16	Unified	2	2048	1	64
L3	112.5M	900M	15	Unified	3	122880	1	64

8. numactl --hardware

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

available: 32 nodes (0-31)
node 0 cpus: 0-14,480-494
node 0 size: 128353 MB
node 0 free: 127452 MB
node 1 cpus: 15-29,495-509
node 1 size: 129015 MB
node 1 free: 128660 MB
node 2 cpus: 30-44,510-524
node 2 size: 129015 MB
node 2 free: 128524 MB
node 3 cpus: 45-59,525-539

(Continued on next page)



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Platform Notes (Continued)

node 3 size: 129015 MB
node 3 free: 128376 MB
node 4 cpus: 60-74,540-554
node 4 size: 129015 MB
node 4 free: 128661 MB
node 5 cpus: 75-89,555-569
node 5 size: 129015 MB
node 5 free: 128536 MB
node 6 cpus: 90-104,570-584
node 6 size: 129015 MB
node 6 free: 128601 MB
node 7 cpus: 105-119,585-599
node 7 size: 129015 MB
node 7 free: 128634 MB
node 8 cpus: 120-134,600-614
node 8 size: 129015 MB
node 8 free: 128690 MB
node 9 cpus: 135-149,615-629
node 9 size: 129015 MB
node 9 free: 128718 MB
node 10 cpus: 150-164,630-644
node 10 size: 129015 MB
node 10 free: 128637 MB
node 11 cpus: 165-179,645-659
node 11 size: 129015 MB
node 11 free: 128665 MB
node 12 cpus: 180-194,660-674
node 12 size: 129015 MB
node 12 free: 128563 MB
node 13 cpus: 195-209,675-689
node 13 size: 129015 MB
node 13 free: 128459 MB
node 14 cpus: 210-224,690-704
node 14 size: 128977 MB
node 14 free: 128473 MB
node 15 cpus: 225-239,705-719
node 15 size: 129015 MB
node 15 free: 128640 MB
node 16 cpus: 240-254,720-734
node 16 size: 129015 MB
node 16 free: 128430 MB
node 17 cpus: 255-269,735-749
node 17 size: 129015 MB
node 17 free: 128387 MB
node 18 cpus: 270-284,750-764
node 18 size: 129015 MB
node 18 free: 128340 MB
node 19 cpus: 285-299,765-779
node 19 size: 129015 MB
node 19 free: 128248 MB
node 20 cpus: 300-314,780-794
node 20 size: 129015 MB
node 20 free: 128620 MB
node 21 cpus: 315-329,795-809
node 21 size: 129015 MB
node 21 free: 128570 MB
node 22 cpus: 330-344,810-824
node 22 size: 129015 MB
node 22 free: 128759 MB
node 23 cpus: 345-359,825-839

(Continued on next page)



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node 23 size: 129015 MB
node 23 free: 128722 MB
node 24 cpus: 360-374,840-854
node 24 size: 129015 MB
node 24 free: 128530 MB
node 25 cpus: 375-389,855-869
node 25 size: 129015 MB
node 25 free: 128417 MB
node 26 cpus: 390-404,870-884
node 26 size: 129015 MB
node 26 free: 128542 MB
node 27 cpus: 405-419,885-899
node 27 size: 129015 MB
node 27 free: 128388 MB
node 28 cpus: 420-434,900-914
node 28 size: 129015 MB
node 28 free: 128556 MB
node 29 cpus: 435-449,915-929
node 29 size: 129015 MB
node 29 free: 128551 MB
node 30 cpus: 450-464,930-944
node 30 size: 129015 MB
node 30 free: 128322 MB
node 31 cpus: 465-479,945-959
node 31 size: 128860 MB
node 31 free: 128366 MB
node distances:

node	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31																			
0:	10	12	12	12	21	21	21	21	21	21	21	21	31	31	31	31	31	31	31	21	21	21	21	21	21
1:	12	10	12	12	21	21	21	21	21	21	21	21	31	31	31	31	31	31	31	21	21	21	21	21	21
2:	12	12	10	12	21	21	21	21	21	21	21	21	31	31	31	31	31	31	31	21	21	21	21	21	21
3:	12	12	12	10	21	21	21	21	21	21	21	21	31	31	31	31	31	31	31	21	21	21	21	21	21
4:	21	21	21	21	10	12	12	31	31	31	31	21	21	21	21	21	21	21	21	31	31	31	31	31	31
5:	21	21	21	21	12	10	12	12	31	31	31	21	21	21	21	21	21	21	21	31	31	31	31	31	31
6:	21	21	21	21	12	12	10	12	31	31	31	21	21	21	21	21	21	21	21	31	31	31	31	31	31
7:	21	21	21	21	12	12	12	10	31	31	31	21	21	21	21	21	21	21	21	31	31	31	31	31	31
8:	21	21	21	21	21	31	31	10	12	12	12	21	21	21	21	21	21	21	21	31	31	31	31	31	31
9:	21	21	21	21	31	31	31	12	10	12	12	21	21	21	21	21	21	21	21	31	31	31	31	31	31
10:	21	21	21	21	31	31	31	12	12	10	12	21	21	21	21	21	21	21	21	31	31	31	31	31	31
11:	21	21	21	21	31	31	31	12	12	12	10	21	21	21	21	21	21	21	21	31	31	31	31	31	31
12:	31	31	31	31	21	21	21	21	21	21	21	10	12	12	12	31	31	31	31	21	21	21	21	21	21
13:	31	31	31	31	21	21	21	21	21	21	21	12	10	12	12	31	31	31	31	21	21	21	21	21	21
14:	31	31	31	31	31	21	21	21	21	21	21	12	12	10	12	31	31	31	31	21	21	21	21	21	21
15:	31	31	31	31	21	21	21	21	21	21	21	12	12	12	10	31	31	31	31	21	21	21	21	21	21

(Continued on next page)



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```
21 21 21 31 31 31 31
16: 31 31 31 31 31 21 21 21 21 21 21 31 31 31 31 10 12 12 12 21 21 21 21 21
21 21 21 31 31 31 31
17: 31 31 31 31 21 21 21 21 21 21 31 31 31 31 12 10 12 12 21 21 21 21 21
21 21 21 31 31 31 31
18: 31 31 31 31 21 21 21 21 21 21 31 31 31 31 12 12 10 12 21 21 21 21 21
21 21 21 31 31 31 31
19: 31 31 31 31 21 21 21 21 21 21 31 31 31 31 12 12 12 10 21 21 21 21 21
21 21 21 31 31 31 31
20: 21 21 21 21 31 31 31 31 31 31 21 21 21 21 21 21 21 10 12 12 12 31
31 31 31 21 21 21 21
21: 21 21 21 21 31 31 31 31 31 31 21 21 21 21 21 21 21 12 10 12 12 31
31 31 31 21 21 21 21
22: 21 21 21 21 31 31 31 31 31 31 21 21 21 21 21 21 21 12 12 10 12 31
31 31 31 21 21 21 21
23: 21 21 21 21 31 31 31 31 31 31 21 21 21 21 21 21 21 12 12 12 10 31
31 31 31 21 21 21 21
24: 21 21 21 21 31 31 31 31 31 31 21 21 21 21 21 21 21 31 31 31 31 10
12 12 12 21 21 21 21
25: 21 21 21 21 31 31 31 31 31 31 21 21 21 21 21 21 21 31 31 31 31 12
10 12 12 21 21 21 21
26: 21 21 21 31 31 31 31 31 31 21 21 21 21 21 21 21 21 31 31 31 31 12
12 10 12 21 21 21 21
27: 21 21 21 31 31 31 31 31 31 21 21 21 21 21 21 21 21 31 31 31 31 12
12 12 10 21 21 21 21
28: 31 31 31 31 21 21 21 21 21 21 31 31 31 31 31 31 31 21 21 21 21 21
21 21 21 10 12 12 12
29: 31 31 31 31 21 21 21 21 21 21 31 31 31 31 31 31 31 21 21 21 21 21
21 21 21 12 10 12 12
30: 31 31 31 31 21 21 21 21 21 21 31 31 31 31 31 31 31 21 21 21 21 21
21 21 21 12 12 10 12
31: 31 31 31 31 21 21 21 21 21 21 31 31 31 31 31 31 31 21 21 21 21 21
21 21 21 12 12 12 10
```

```
-----
9. /proc/meminfo
   MemTotal:      4226715884 kB
```

```
-----
10. who -r
    run-level 3 Jun 19 00:04
```

```
-----
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 nvme-fc-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 autostart-initscripts blk-availability boot-sysctl ca-certificates chrony-wait
chronyd console-getty cups cups-browsed debug-shell ebttables 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
```

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SPEC CPU®2017 Integer Rate Result

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Lenovo Global Technology

ThinkSystem SR950 V3
(1.90 GHz, Intel Xeon Platinum 8490H)

SPECrate®2017_int_base = 3810

SPECrate®2017_int_peak = Not Run

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Jun-2026

Hardware Availability: Oct-2023

Software Availability: Apr-2026

Platform Notes (Continued)

indirect systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd
systemd-userdbd wickedd

13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-6.4.0-150700.51-default
root=UUID=e1445b64-10ff-47e2-9082-84446e3c722f
splash=silent
mitigations=auto
quiet
security=apparmor

14. cpupower frequency-info
analyzing CPU 519:
current policy: frequency should be within 800 MHz and 3.50 GHz.
The governor "powersave" may decide which speed to use
within this range.
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
defrag 1
max_ptes_none 511
max_ptes_shared 256
max_ptes_swap 64
pages_to_scan 4096
scan_sleep_millisecs 10000

(Continued on next page)



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Platform Notes (Continued)

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-ic2026.0
Filesystem Type Size Used Avail Use% Mounted on
/dev/nvme0n1p3 xfs 893G 113G 780G 13% /

20. /sys/devices/virtual/dmi/id

Vendor: Lenovo
Product: ThinkSystem SR950 V3
Product Family: ThinkSystem
Serial: JPBLR002

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:

1x Samsung M321R8GA0BB0-CQKDG 64 GB 2 rank 4800
3x Samsung M321R8GA0BB0-CQKEG 64 GB 2 rank 4800
14x Samsung M321R8GA0BB0-CQKMG 64 GB 2 rank 4800
46x Samsung M321R8GA0BB0-CQKVG 64 GB 2 rank 4800

22. BIOS

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

BIOS Vendor: Lenovo
BIOS Version: EBE123G-7.50
BIOS Date: 05/15/2026
BIOS Revision: 7.50
Firmware Revision: 7.10

Compiler Version Notes

C | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base) 525.x264_r(base) 557.xz_r(base)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2026.0.0 Build 20260331
Copyright (C) 1985-2026 Intel Corporation. All rights reserved.

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 2026.0.0 Build 20260331
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Fortran | 548.exchange2_r(base)

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Compiler Version Notes (Continued)

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2026.0.0 Build 20260331
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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
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/home/specdev/intel-compilers/compiler/latest/lib -lqkmallo

C++ benchmarks:

-w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-fdelayed-template-parsing
-L/home/specdev/intel-compilers/compiler/latest/lib -lqkmallo

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Base Optimization Flags (Continued)

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/home/specdev/intel-compilers/compiler/latest/lib -lqkmallo
```

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-Eaglestream-AC.html>

<http://www.spec.org/cpu2017/flags/Intel-ic2026-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-Eaglestream-AC.xml>

<http://www.spec.org/cpu2017/flags/Intel-ic2026-official-linux64.xml>

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For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

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