



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Lenovo Global Technology

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

SPECrate®2026_fp_base = 1630

SPECrate®2026_fp_peak = Not Run

CPU2026 License: 9017

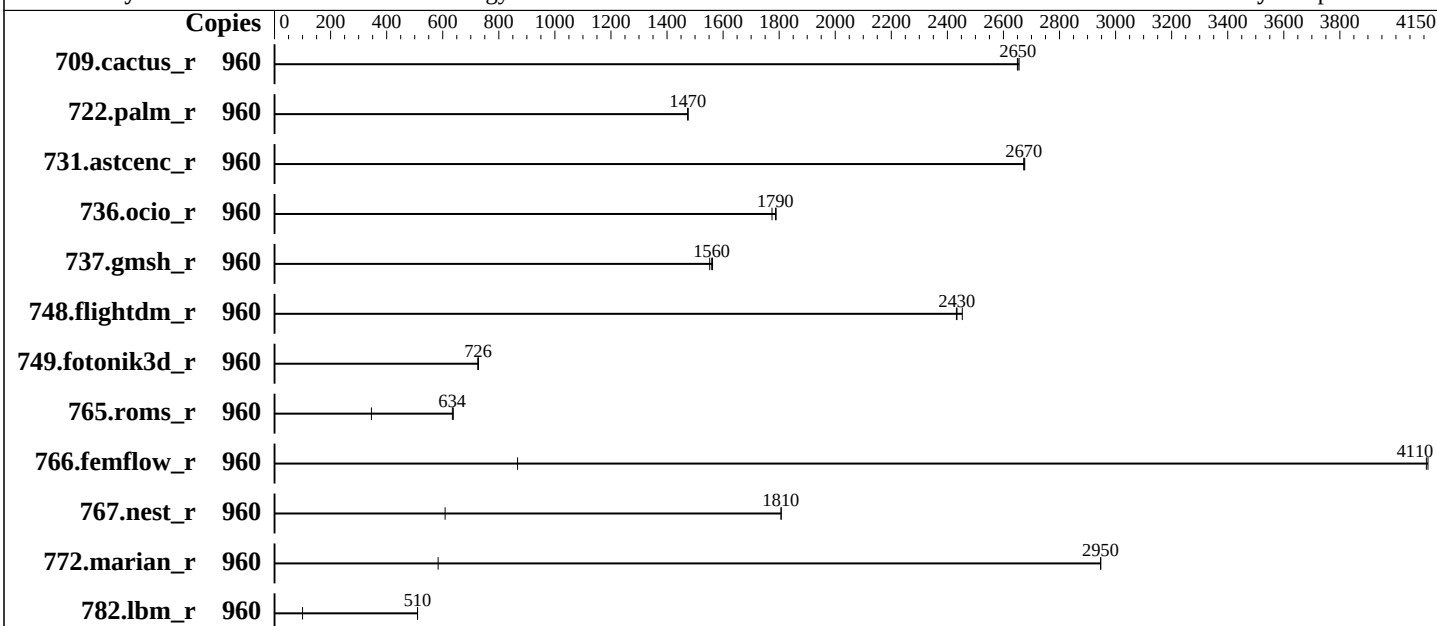
Test Sponsor: Lenovo Global Technology

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
Cooling: Air
Other: None

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
Compiler Category: Vendor
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: tcmalloc memory allocator v2.18.1
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
709.cactus_r	960	<u>311</u>	<u>2650</u>	311	2650	310	2660							
722.palm_r	960	859	1470	<u>859</u>	<u>1470</u>	860	1470							
731.astcenc_r	960	<u>302</u>	<u>2670</u>	302	2670	301	2680							
736.ocio_r	960	469	1790	473	1770	<u>470</u>	<u>1790</u>							
737.gmsh_r	960	284	1550	<u>283</u>	<u>1560</u>	282	1560							
748.flightdm_r	960	<u>282</u>	<u>2430</u>	280	2450	283	2430							
749.fotonik3d_r	960	1529	726	<u>1528</u>	<u>726</u>	1526	727							
765.roms_r	960	2371	638	<u>2384</u>	<u>634</u>	4375	346							
766.femflow_r	960	<u>343</u>	<u>4110</u>	342	4110	1625	867							
767.nest_r	960	<u>421</u>	<u>1810</u>	421	1810	1251	608							
772.marian_r	960	514	2950	<u>514</u>	<u>2950</u>	2598	584							
782.lbm_r	960	<u>1079</u>	<u>510</u>	1078	510	5503	100							

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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/cpu2026-1.0.1-ic2026.0-rate/lib"

General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using CentOS Stream 9.
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.:

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General Notes (Continued)

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.

tcmalloc, a fast, multithreaded malloc implementation

built with the CentOS Stream 9, and the system compiler gcc 11.5.0

sources available from github.com/gperftools/gperftools

Platform Notes

BIOS configuration:

Choose Operating Mode set to Maximum Performance

DCU Streamer Prefetcher set to Disabled

SNC set to SNC4

Misc set to Option4

Sysinfo program /home/cpu2026-1.0.1-ic2026.0-rate/bin/sysinfo

Rev: 779ab21020787073335a329f3a45e2cd

running on localhost Wed Jun 24 04:03:40 2026

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

Table of contents

1. uname -srvm
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

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Platform Notes (Continued)

19. Disk information

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

21. dmidecode

22. BIOS

1. uname -srv

Linux 6.4.0-150700.51-default #1 SMP PREEMPT_DYNAMIC Wed Apr 30 21:35:43 UTC 2025 (6930611) x86_64

2. w

04:03:40 up 4 min, 1 user, load average: 1.66, 7.24, 4.07

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)	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=43

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 Run503-compliant-ic2026.0-lin-sapphirerapids-ratefp-base-smt-on-20260429_revB.sh

runcpu --nobuild --iterations=3 --reportable --action validate --define default-platform-flags --copies 960

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Platform Notes (Continued)

```
-c ic2026.0-sapphirerapids-cpu2026-1.0.1-rate-20260429_revB.cfg --define smt-on --define cores=480
--define physicalfirst --define invoke_with_interleave --define drop_caches --tune base -o all fprate
runcpu --nobuild --iterations 3 --reportable --action validate --define default-platform-flags --copies 960
--configfile ic2026.0-sapphirerapids-cpu2026-1.0.1-rate-20260429_revB.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 fprate --nopreenv --note-preenv
--logfile $SPEC/tmp/CPU2026.009/templogs/preenv.fprate.009.0.log --lognum 009.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2026-1.0.1-ic2026.0-rate
```

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
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

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Platform Notes (Continued)

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 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 rdpid 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

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Platform Notes (Continued)

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
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/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2:	Mitigation; Enhanced / Automatic IBRS; IBPB conditional; RSB filling; PBRB-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

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Platform Notes (Continued)

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: 127474 MB

node 1 cpus: 15-29,495-509

node 1 size: 129015 MB

node 1 free: 128671 MB

node 2 cpus: 30-44,510-524

node 2 size: 129015 MB

node 2 free: 128594 MB

node 3 cpus: 45-59,525-539

node 3 size: 129015 MB

node 3 free: 128599 MB

node 4 cpus: 60-74,540-554

node 4 size: 129015 MB

node 4 free: 128682 MB

node 5 cpus: 75-89,555-569

node 5 size: 129015 MB

node 5 free: 128721 MB

node 6 cpus: 90-104,570-584

node 6 size: 129015 MB

node 6 free: 128730 MB

node 7 cpus: 105-119,585-599

node 7 size: 129015 MB

node 7 free: 128671 MB

node 8 cpus: 120-134,600-614

node 8 size: 129015 MB

node 8 free: 128587 MB

node 9 cpus: 135-149,615-629

node 9 size: 129015 MB

node 9 free: 128584 MB

node 10 cpus: 150-164,630-644

node 10 size: 128977 MB

node 10 free: 128557 MB

node 11 cpus: 165-179,645-659

node 11 size: 129015 MB

node 11 free: 128536 MB

node 12 cpus: 180-194,660-674

node 12 size: 129015 MB

node 12 free: 128596 MB

node 13 cpus: 195-209,675-689

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Platform Notes (Continued)

node 13 size: 129015 MB
node 13 free: 128596 MB
node 14 cpus: 210-224, 690-704
node 14 size: 129015 MB
node 14 free: 128275 MB
node 15 cpus: 225-239, 705-719
node 15 size: 129015 MB
node 15 free: 128450 MB
node 16 cpus: 240-254, 720-734
node 16 size: 129015 MB
node 16 free: 128477 MB
node 17 cpus: 255-269, 735-749
node 17 size: 129015 MB
node 17 free: 128503 MB
node 18 cpus: 270-284, 750-764
node 18 size: 129015 MB
node 18 free: 128384 MB
node 19 cpus: 285-299, 765-779
node 19 size: 129015 MB
node 19 free: 128175 MB
node 20 cpus: 300-314, 780-794
node 20 size: 129015 MB
node 20 free: 128607 MB
node 21 cpus: 315-329, 795-809
node 21 size: 129015 MB
node 21 free: 128629 MB
node 22 cpus: 330-344, 810-824
node 22 size: 129015 MB
node 22 free: 128659 MB
node 23 cpus: 345-359, 825-839
node 23 size: 129015 MB
node 23 free: 128424 MB
node 24 cpus: 360-374, 840-854
node 24 size: 129015 MB
node 24 free: 128398 MB
node 25 cpus: 375-389, 855-869
node 25 size: 129015 MB
node 25 free: 128631 MB
node 26 cpus: 390-404, 870-884
node 26 size: 129015 MB
node 26 free: 128587 MB
node 27 cpus: 405-419, 885-899
node 27 size: 129015 MB
node 27 free: 128625 MB
node 28 cpus: 420-434, 900-914
node 28 size: 129015 MB
node 28 free: 128471 MB

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node 29 cpus: 435-449,915-929

node 29 size: 129015 MB

node 29 free: 128673 MB

node 30 cpus: 450-464,930-944

node 30 size: 129015 MB

node 30 free: 128471 MB

node 31 cpus: 465-479,945-959

node 31 size: 128860 MB

node 31 free: 128426 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	31	21	21	21	21	21
	21	21	21	31	31	31	31																		
1:	12	10	12	12	21	21	21	21	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21
	21	21	21	31	31	31	31																		
2:	12	12	10	12	21	21	21	21	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21
	21	21	21	31	31	31	31																		
3:	12	12	12	10	21	21	21	21	21	21	21	21	31	31	31	31	31	31	31	31	21	21	21	21	21
	21	21	21	31	31	31	31																		
4:	21	21	21	21	21	10	12	12	12	31	31	31	31	21	21	21	21	21	21	21	31	31	31	31	31
	31	31	31	31	21	21	21	21																	
5:	21	21	21	21	12	10	12	12	31	31	31	31	21	21	21	21	21	21	21	21	31	31	31	31	31
	31	31	31	21	21	21	21																		
6:	21	21	21	21	12	12	10	12	31	31	31	31	21	21	21	21	21	21	21	21	31	31	31	31	31
	31	31	31	21	21	21	21																		
7:	21	21	21	21	12	12	12	10	31	31	31	31	21	21	21	21	21	21	21	21	31	31	31	31	31
	31	31	31	21	21	21	21																		
8:	21	21	21	21	31	31	31	31	10	12	12	12	21	21	21	21	21	21	21	21	31	31	31	31	31
	31	31	31	21	21	21	21																		
9:	21	21	21	21	31	31	31	31	12	10	12	12	21	21	21	21	21	21	21	21	31	31	31	31	31
	31	31	31	21	21	21	21																		
10:	21	21	21	21	31	31	31	31	12	12	10	12	21	21	21	21	21	21	21	21	31	31	31	31	31
	31	31	31	21	21	21	21																		
11:	21	21	21	21	31	31	31	31	12	12	12	10	21	21	21	21	21	21	21	21	31	31	31	31	31
	31	31	31	21	21	21	21																		
12:	31	31	31	31	21	21	21	21	21	21	21	21	10	12	12	12	31	31	31	31	21	21	21	21	21
	21	21	21	31	31	31	31																		
13:	31	31	31	31	21	21	21	21	21	21	21	21	12	10	12	12	31	31	31	31	21	21	21	21	21
	21	21	21	31	31	31	31																		
14:	31	31	31	31	21	21	21	21	21	21	21	21	12	12	10	12	31	31	31	31	21	21	21	21	21
	21	21	21	31	31	31	31																		
15:	31	31	31	31	21	21	21	21	21	21	21	21	12	12	12	10	31	31	31	31	21	21	21	21	21
	21	21	21	31	31	31	31																		
16:	31	31	31	31	21	21	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	21	21	31	31	31	31	12	10	12	12	21	21	21	21	21

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SPECrate®2026_fp_base = 1630

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

SPECrate®2026_fp_peak = Not Run

CPU2026 License: 9017

Test Date: Jun-2026

Test Sponsor: Lenovo Global Technology

Hardware Availability: Oct-2023

Tested by: Lenovo Global Technology

Software Availability: Apr-2026

Platform Notes (Continued)

```
21 21 21 31 31 31 31
18: 31 31 31 31 21 21 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 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 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 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 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 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 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 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 21 31 31 31 31 31 31 31 31 21 21 21 21 21 21 21 31 31 31 31 12
12 10 12 21 21 21 21
27: 21 21 21 21 31 31 31 31 31 31 31 31 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 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 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 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 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: 4226715952 kB

10. who -r

run-level 3 Jun 24 03:59

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

(Continued on next page)



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Platform Notes (Continued)

```
kbdsettings klog lvm2-monitor nsd nvmeefc-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
chronyd console-getty cups cups-browsed debug-shell ebttables exchange-bmc-os-info
firewalld fsidd gpm grub2-once haveged ipmi ipmiev 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
indirect 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 394:

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
```

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Test Date: Jun-2026

Hardware Availability: Oct-2023

Software Availability: Apr-2026

Platform Notes (Continued)

```
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+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
```

18. OS release

```
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP7
```

19. Disk information

SPEC is set to: /home/cpu2026-1.0.1-ic2026.0-rate

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/nvme0n1p3	xfs	893G	135G	758G	16%	/

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.

(Continued on next page)



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Test Sponsor: Lenovo Global Technology

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Test Date: Jun-2026

Hardware Availability: Oct-2023

Software Availability: Apr-2026

Platform Notes (Continued)

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 | 782.lbm_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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C++ | 731.astcenc_r(base) 736.ocio_r(base) 748.flightdm_r(base)
| 766.femflow_r(base) 767.nest_r(base) 772.marian_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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C++, C | 709.cactus_r(base) 737.gmsh_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 | 722.palm_r(base) 749.fotonik3d_r(base) 765.roms_r(base)

(Continued on next page)



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Test Date: Jun-2026

Test Sponsor: Lenovo Global Technology

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Tested by: Lenovo Global Technology

Software Availability: Apr-2026

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

Benchmarks using both C and C++:

icpx icx

Base Portability Flags

737.gmsh_r: -fno-associative-math

Base Optimization Flags

C benchmarks:

-m64 -std=c18 -Wl,-z,muldefs -Wl,-plugin-opt=-inline-threshold=1500
-xsapphirerapids -mprefer-vector-width=512 -O3 -ffp-model=fast -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/tcmalloc-2.18.1/lib -ltcmalloc_minimal

C++ benchmarks:

-m64 -std=c++17 -Wl,-z,muldefs -Wl,-plugin-opt=-inline-threshold=1500
-xsapphirerapids -mprefer-vector-width=512 -O3 -ffp-model=fast -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/tcmalloc-2.18.1/lib -ltcmalloc_minimal

Fortran benchmarks:

-m64 -stand f18 -Wl,-z,muldefs -Wl,-plugin-opt=-inline-threshold=1500
-xsapphirerapids -mprefer-vector-width=512 -O3 -ffp-model=fast -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4

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Base Optimization Flags (Continued)

Fortran benchmarks (continued):

-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/tcmalloc-2.18.1/lib -ltcmalloc_minimal

Benchmarks using both C and C++:

-m64 -std=c++17 -std=c18 -Wl, -z, muldefs
-Wl, -plugin-opt=-inline-threshold=1500 -xsapphirerapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/tcmalloc-2.18.1/lib -ltcmalloc_minimal

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

<http://www.spec.org/cpu2026/results/flags/Lenovo-Platform-SPECcpu2026-Flags-V1.2-Eaglestream-AD.html>
<http://www.spec.org/cpu2026/results/flags/Intel-ic2026-official-linux64-v1.1.html>

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

<http://www.spec.org/cpu2026/results/flags/Lenovo-Platform-SPECcpu2026-Flags-V1.2-Eaglestream-AD.xml>
<http://www.spec.org/cpu2026/results/flags/Intel-ic2026-official-linux64-v1.1.xml>

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Tested with SPEC CPU®2026 v1.0.1 on 2026-06-23 16:03:39-0400.

Report generated on 2026-07-14 17:22:59 by CPU2026 PDF formatter (unknown).

Originally published on 2026-07-14.