



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Dell Inc.

SPECrate®2026_fp_base = 910

PowerEdge R770AP (Intel Xeon 6980P)

SPECrate®2026_fp_peak = 933

CPU2026 License: 6573

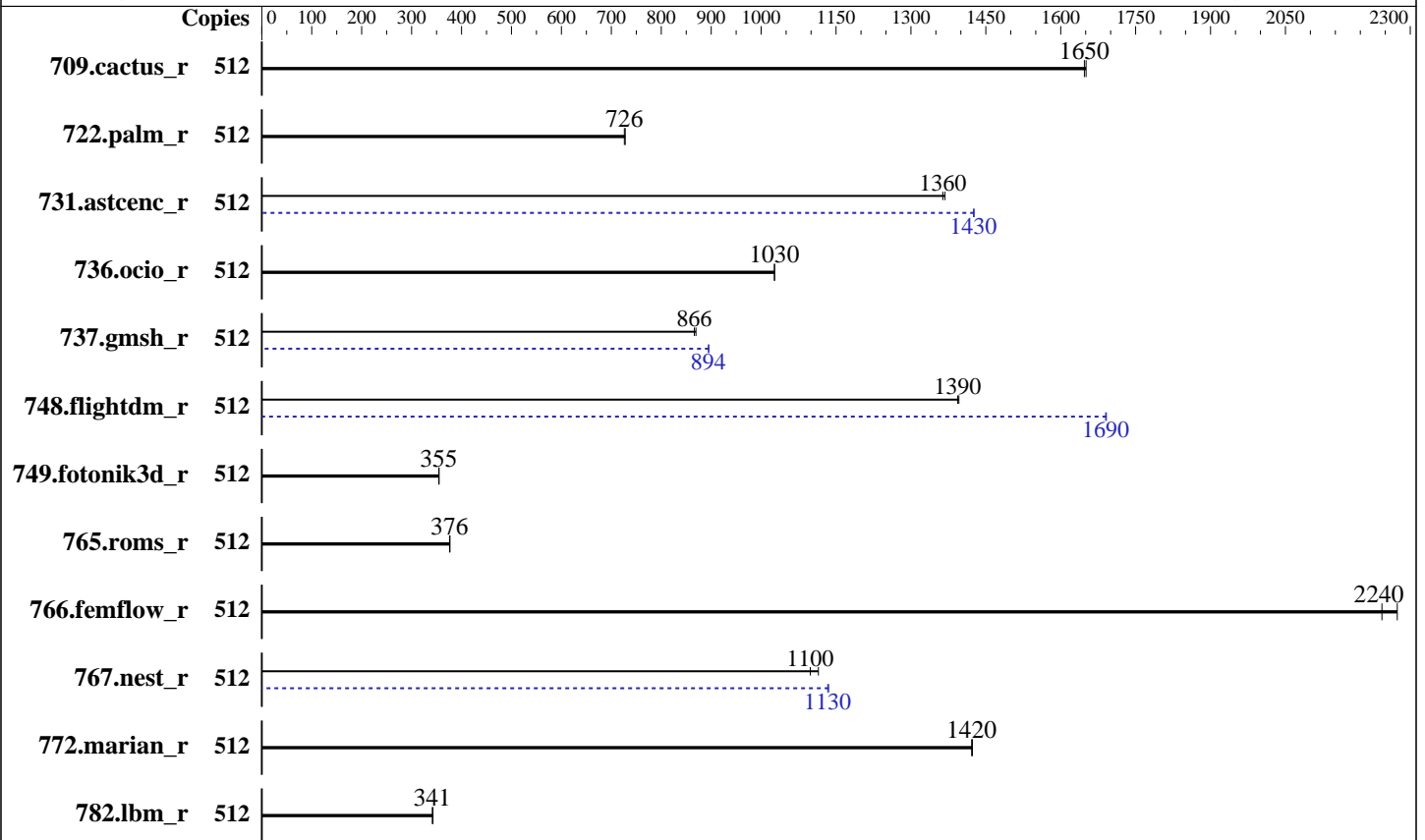
Test Date: Feb-2026

Test Sponsor: Dell Inc.

Hardware Availability: Dec-2025

Tested by: Dell Inc.

Software Availability: Nov-2025



Hardware

CPU Name: Intel Xeon 6980P
 Max MHz: 3900
 Nominal: 2000
 Enabled: 256 cores, 2 chips, 2 threads/core
 Orderable: 1,2 chips
 Cache L1: 64 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 504 MB I+D on chip per chip
 Other: None
 Memory: 1536 GB (24 x 64 GB 2Rx4 PC5-6400B-R)
 Storage: 250 GB on tmpfs
 Cooling: Air
 Other: None

Software

OS: SUSE Linux Enterprise Server 16.0
 6.12.0-160000.5-default
 Compiler: C/C++: Version 2025.3 of Intel oneAPI DPC++/C++
 Compiler for Linux;
 Fortran: Version 2025.3 of Intel Fortran
 Compiler for Linux
 Compiler Category: Vendor
 Firmware: Version 1.1.6 released Nov-2025
 File System: tmpfs
 System State: Run level 5 (graphical multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 Other: jemalloc memory allocator v5.3
 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	512	<u>267</u>	<u>1650</u>	266	1650			512	<u>267</u>	<u>1650</u>	266	1650		
722.palm_r	512	<u>931</u>	<u>726</u>	929	728			512	<u>931</u>	<u>726</u>	929	728		
731.ascenc_r	512	<u>315</u>	<u>1360</u>	314	1370			512	<u>302</u>	<u>1430</u>	301	1430		
736.ocio_r	512	<u>436</u>	<u>1030</u>	436	1030			512	<u>436</u>	<u>1030</u>	436	1030		
737.gmsh_r	512	<u>271</u>	<u>866</u>	270	869			512	262	895	<u>263</u>	<u>894</u>		
748.flightdm_r	512	263	1400	<u>263</u>	<u>1390</u>			512	217	1690	<u>217</u>	<u>1690</u>		
749.fotonik3d_r	512	<u>1669</u>	<u>355</u>	1667	355			512	<u>1669</u>	<u>355</u>	1667	355		
765.roms_r	512	2140	377	<u>2145</u>	<u>376</u>			512	2140	377	<u>2145</u>	<u>376</u>		
766.femflow_r	512	330	2270	<u>335</u>	<u>2240</u>			512	330	2270	<u>335</u>	<u>2240</u>		
767.nest_r	512	364	1110	<u>370</u>	<u>1100</u>			512	<u>358</u>	<u>1130</u>	358	1140		
772.marian_r	512	568	1420	<u>569</u>	<u>1420</u>			512	568	1420	<u>569</u>	<u>1420</u>		
782.lbm_r	512	856	343	<u>859</u>	<u>341</u>			512	856	343	<u>859</u>	<u>341</u>		

SPECrate®2026_fp_base = **910**

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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 = "/mnt/ramdisk/cpu2026rc2/lib"
MALLOC_CONF = "retain:true"

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

(Continued on next page)



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General Notes (Continued)

```

runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
jemalloc, a general purpose malloc implementation
built with the CentOS Stream 9, and the system compiler gcc 11.5.0
sources available from jemalloc.net or https://github.com/jemalloc/jemalloc/releases
Benchmark run from a 250 GB ramdisk created with the cmd: "mount -t tmpfs -o size=250G tmpfs /mnt/ramdisk"

```

Platform Notes

BIOS Settings:

Sub NUMA Cluster : Enabled

System Profile : Custom

CPU Power Management : Maximum Performance

C-States : Autonomous

Latency Optimized Mode : Enabled

Energy Efficient Policy : Performance

Sysinfo program /mnt/ramdisk/cpu2026rc2/bin/sysinfo

Rev: 069f95da7e7f5d81b2ce48a82150e54f

running on R7702AP-R770AP Thu Feb 5 15:35:13 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. Systemd service manager version: systemd 257 (257.7+suse.19.ga0dfd5de4c)
11. Services, from systemctl list-unit-files
12. Linux kernel boot-time arguments, from /proc/cmdline
13. cpupower frequency-info
14. sysctl
15. /sys/kernel/mm/transparent_hugepage
16. /sys/kernel/mm/transparent_hugepage/khugepaged
17. OS release
18. Disk information

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Platform Notes (Continued)

19. /sys/devices/virtual/dmi/id
20. dmidecode
21. BIOS

1. uname -srvm
Linux 6.12.0-160000.5-default #1 SMP PREEMPT_DYNAMIC Wed Sep 10 15:26:25 UTC 2025 (3545bbd) x86_64

2. w
15:35:13 up 15:32, 1 user, load average: 193.59, 422.43, 476.81
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
root tty1 - 00:03 15:27m 1.39s ? /bin/bash
/home/DellFiles/bin/Intel/dell-run-speccpu.sh rate --define DL-VERS=7.0_T01 --output_format html,pdf,txt

3. Username
From environment variable \$USER: root

4. ulimit -a
real-time non-blocking time (microseconds, -R) unlimited
core file size (blocks, -c) unlimited
data seg size (kbytes, -d) unlimited
scheduling priority (-e) 0
file size (blocks, -f) unlimited
pending signals (-i) 6188992
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) 6188992
virtual memory (kbytes, -v) unlimited
file locks (-x) unlimited

5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize=47
login -- root
-bash
/bin/bash /home/DellFiles/bin/DELL_rate.sh
/bin/bash /home/DellFiles/bin/dell-run-main.sh rate

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Platform Notes (Continued)

```

/bin/bash /home/DellFiles/bin/dell-run-main.sh rate
/bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh rate --define DL-VERS=7.0_T01 --output_format
html,pdf,txt
/bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh rate --define DL-VERS=7.0_T01 --output_format
html,pdf,txt
runcpu --nobuild --reportable --action validate --define default-platform-flags --copies 512 -c
ic2025.3-graniterapids-cpu2026-0.902-rate-20260121.cfg --define smt-on --define cores=256 --define
physicalfirst --define invoke_with_interleave --define drop_caches --tune base,peak -o all --iterations 2
--define DL-VERS=7.0_T01 --output_format html,pdf,txt fprate
runcpu --nobuild --reportable --action validate --define default-platform-flags --copies 512 --configfile
ic2025.3-graniterapids-cpu2026-0.902-rate-20260121.cfg --define smt-on --define cores=256 --define
physicalfirst --define invoke_with_interleave --define drop_caches --tune base,peak --output_format all
--iterations 2 --define DL-VERS=7.0_T01 --output_format html,pdf,txt --nopower --runmode rate --tune
base:peak --size refrate fprate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2026.002/templogs/preenv.fprate.002.0.log --lognum 002.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2026rc2

```

```

-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6980P
vendor_id      : GenuineIntel
cpu family     : 6
model          : 173
stepping       : 1
microcode      : 0x10003f3
bugs           : spectre_v1 spectre_v2 spec_store_bypass swags bhi spectre_v2_user
cpu cores      : 128
siblings       : 256
2 physical ids (chips)
512 processors (hardware threads)
physical id 0: core ids 0-42,64-106,128-169
physical id 1: core ids 0-42,64-106,128-169
physical id 0: apicids 0-85,128-213,256-339
physical id 1: apicids 512-597,640-725,768-851

```

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 2.41.1:
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):            512

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Platform Notes (Continued)

```

On-line CPU(s) list:          0-511
Vendor ID:                   GenuineIntel
Model name:                   Intel(R) Xeon(R) 6980P
CPU family:                   6
Model:                        173
Thread(s) per core:          2
Core(s) per socket:          128
Socket(s):                    2
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
                               nopl xtopology nonstop_tsc cpuid aperfperf 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 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:                    12 MiB (256 instances)
L1i cache:                    16 MiB (256 instances)
L2 cache:                     512 MiB (256 instances)
L3 cache:                     1008 MiB (2 instances)
NUMA node(s):                 6
NUMA node0 CPU(s):           0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46
                               , 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 256, 258,
                               260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 29
                               2, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324,
                               326, 328, 330, 332, 334, 336, 338, 340
NUMA node1 CPU(s):           86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 1
                               22, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154
                               , 156, 158, 160, 162, 164, 166, 168, 170, 342, 344, 346, 348, 350, 352, 354, 356, 3
                               58, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390
                               , 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 4
                               24, 426

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Platform Notes (Continued)

```

NUMA node2 CPU(s):      172,174,176,178,180,182,184,186,188,190,192,194,196,198,200,202,20
                          4,206,208,210,212,214,216,218,220,222,224,226,228,230,232,234,236,
                          238,240,242,244,246,248,250,252,254,428,430,432,434,436,438,440,44
                          2,444,446,448,450,452,454,456,458,460,462,464,466,468,470,472,474,
                          476,478,480,482,484,486,488,490,492,494,496,498,500,502,504,506,50
                          8,510
NUMA node3 CPU(s):      1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47
                          ,49,51,53,55,57,59,61,63,65,67,69,71,73,75,77,79,81,83,85,257,259,
                          261,263,265,267,269,271,273,275,277,279,281,283,285,287,289,291,29
                          3,295,297,299,301,303,305,307,309,311,313,315,317,319,321,323,325,
                          327,329,331,333,335,337,339,341
NUMA node4 CPU(s):      87,89,91,93,95,97,99,101,103,105,107,109,111,113,115,117,119,121,1
                          23,125,127,129,131,133,135,137,139,141,143,145,147,149,151,153,155
                          ,157,159,161,163,165,167,169,171,343,345,347,349,351,353,355,357,3
                          59,361,363,365,367,369,371,373,375,377,379,381,383,385,387,389,391
                          ,393,395,397,399,401,403,405,407,409,411,413,415,417,419,421,423,4
                          25,427
NUMA node5 CPU(s):      173,175,177,179,181,183,185,187,189,191,193,195,197,199,201,203,20
                          5,207,209,211,213,215,217,219,221,223,225,227,229,231,233,235,237,
                          239,241,243,245,247,249,251,253,255,429,431,433,435,437,439,441,44
                          3,445,447,449,451,453,455,457,459,461,463,465,467,469,471,473,475,
                          477,479,481,483,485,487,489,491,493,495,497,499,501,503,505,507,50
                          9,511
Vulnerability Gather data sampling:  Not affected
Vulnerability Indirect target selection: 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;
                                      PBRSE-eIBRS Not affected; BHI BHI_DIS_S
Vulnerability Srbds:                 Not affected
Vulnerability Tsa:                   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	12M	12	Data	1	64	1	64
L1i	64K	16M	16	Instruction	1	64	1	64
L2	2M	512M	16	Unified	2	2048	1	64

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Platform Notes (Continued)

L3 504M 1008M 16 Unified 3 516096 1 64

8. numactl --hardware

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

available: 6 nodes (0-5)

node 0 cpus:

0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340

node 0 size: 257584 MB

node 0 free: 228424 MB

node 1 cpus:

86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426

node 1 size: 258016 MB

node 1 free: 257062 MB

node 2 cpus:

172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510

node 2 size: 258017 MB

node 2 free: 257098 MB

node 3 cpus:

1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291, 293, 295, 297, 299, 301, 303, 305, 307, 309, 311, 313, 315, 317, 319, 321, 323, 325, 327, 329, 331, 333, 335, 337, 339, 341

node 3 size: 258016 MB

node 3 free: 257466 MB

node 4 cpus:

87, 89, 91, 93, 95, 97, 99, 101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 145, 147, 149, 151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 171, 343, 345, 347, 349, 351, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 383, 385, 387, 389, 391, 393, 395, 397, 399, 401, 403, 405, 407, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427

node 4 size: 257975 MB

node 4 free: 257271 MB

node 5 cpus:

173, 175, 177, 179, 181, 183, 185, 187, 189, 191, 193, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213, 215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239, 241, 243, 245, 247, 249, 251, 253, 255, 429, 431, 433, 435, 437, 439, 441, 443, 445, 447, 449, 451, 453, 455, 457, 459, 461, 463, 465, 467, 469, 471, 473, 475, 477, 479, 481, 483, 485, 487, 489, 491, 493, 495, 497, 499, 501, 503, 505, 507, 509, 511

node 5 size: 257866 MB

node 5 free: 257352 MB

node distances:

(Continued on next page)



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Platform Notes (Continued)

node	0	1	2	3	4	5
0:	10	15	17	21	28	26
1:	15	10	15	23	26	23
2:	17	15	10	26	23	21
3:	21	28	26	10	15	17
4:	23	26	23	15	10	15
5:	26	23	21	17	15	10

 9. /proc/meminfo
 MemTotal: 1584615064 kB
 'who -r' did not return a run level

 10. Systemd service manager version: systemd 257 (257.7+suse.19.ga0dfd5de4c)
 Default Target Status
 graphical running

 11. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	NetworkManager NetworkManager-dispatcher NetworkManager-wait-online audit-rules auditd chronyd dbus-broker firewalld getty@ irqbalance issue-generator kbdsettings klog lvm2-monitor nvme-fc-boot-connections nvmmf-autoconnect rollback rsyslog smartd soft-reboot-cleanup sshd systemd-pstore wpa_supplicant wtmpdb-update-boot
enabled-runtime	systemd-remount-fs
disabled	blk-availability boot-sysctl ca-certificates ca-certificates-setup chrony-wait console-getty debug-shell dnsmasq gpm grub2-once hwloc-dump-hwdata issue-add-ssh-keys kea-ctrl-agent kea-dhcp-ddns kea-dhcp4 kea-dhcp6 kernel-sysctl kexec-load lastlog2-import lunmask lvm-devices-import man-db-create multipathd named nftables nis-domainname rpmconfigcheck rsyncd serial-getty@ setup-systemd-proxy-env smartd_generate_opts snmpd snmptrapd systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd systemd-udev-load-credentials udisks2 wpa_supplicant@
indirect	systemd-userdbd

 12. Linux kernel boot-time arguments, from /proc/cmdline
 BOOT_IMAGE=/boot/vmlinuz-6.12.0-160000.5-default
 root=UUID=6dff5cbc-ddbf-4e34-a126-966254ab211e
 mitigations=auto
 quiet
 security=selinux
 selinux=1

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CPU2026 License: 6573

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Platform Notes (Continued)

```

13. cpupower frequency-info
   analyzing CPU 0:
     Unable to determine current policy
     boost state support:
       Supported: yes
       Active: yes

```

```

-----
14. 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

```

```

-----
15. /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

```

```

-----
16. /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

```

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Platform Notes (Continued)

17. OS release

From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 16.0

18. Disk information

SPEC is set to: /mnt/ramdisk/cpu2026rc2
Filesystem Type Size Used Avail Use% Mounted on
tmpfs tmpfs 250G 13G 238G 6% /mnt/ramdisk

19. /sys/devices/virtual/dmi/id

Vendor: Dell Inc.
Product: PowerEdge R770AP
Product Family: PowerEdge
Serial: R7702AP

20. 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 00AD042300AD HMC94AHBRA480N 64 GB 2 rank 6400
23x 00AD063200AD HMC94AHBRA277N 64 GB 2 rank 6400

21. BIOS

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

BIOS Vendor: Dell Inc.
BIOS Version: 1.1.6
BIOS Date: 11/06/2025
BIOS Revision: 1.1

Compiler Version Notes

C | 782.lbm_r(base, peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2025.3.0 Build 20251010
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Compiler Version Notes (Continued)

```

=====
C++      | 731.astcenc_r(base, peak) 736.ocio_r(base, peak)
         | 748.flightdm_r(base, peak) 766.femflow_r(base, peak)
         | 767.nest_r(base, peak) 772.marian_r(base, peak)
=====

```

```

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
=====

```

```

=====
C++, C   | 709.cactus_r(base, peak) 737.gmsh_r(base, peak)
=====

```

```

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2025.3.0 Build 20251010
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=====

```

```

=====
Fortran  | 722.palm_r(base, peak) 749.fotonik3d_r(base, peak) 765.roms_r(base,
         | peak)
=====

```

```

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version
2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
=====

```

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

Benchmarks using both C and C++:
icpx icx



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Base Portability Flags

```
709.cactus_r: -DSPEC_LP64
722.palm_r: -DSPEC_LP64
731.ascenc_r: -DSPEC_LP64
736.ocio_r: -DSPEC_LP64
737.gmsh_r: -DSPEC_LP64 -fno-associative-math
748.flightdm_r: -DSPEC_LP64
749.fotonik3d_r: -DSPEC_LP64
765.roms_r: -DSPEC_LP64
766.femflow_r: -DSPEC_LP64
767.nest_r: -DSPEC_LP64
772.marian_r: -DSPEC_LP64
782.lbm_r: -DSPEC_LP64
```

Base Optimization Flags

C benchmarks:

```
-m64 -std=c18 -Wl,-z,muldefs -xgraniterapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib
-ljemalloc
```

C++ benchmarks:

```
-m64 -std=c++17 -Wl,-z,muldefs -xgraniterapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib
-ljemalloc
```

Fortran benchmarks:

```
-m64 -stand f18 -Wl,-z,muldefs -xgraniterapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc-5.3.0/lib -ljemalloc
```

Benchmarks using both C and C++:

```
-m64 -std=c++17 -std=c18 -Wl,-z,muldefs -xgraniterapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib
-ljemalloc
```



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Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Benchmarks using both C and C++:

icpx icx

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

782.lbm_r: basepeak = yes

C++ benchmarks:

731.astcenc_r: -m64 -std=c++17 -Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xHost(pass 1)
-ffp-model=fast -xgraniterapids(pass 2) -flto
-mprefer-vector-width=512 -qopt-mem-layout-trans=4 -O3
-mfpmath=sse -funroll-loops
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

736.ocio_r: basepeak = yes

748.flightdm_r: Same as 731.astcenc_r

766.femflow_r: basepeak = yes

767.nest_r: Same as 731.astcenc_r

772.marian_r: basepeak = yes

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Peak Optimization Flags (Continued)

Fortran benchmarks:

722.palm_r: basepeak = yes

749.fotonik3d_r: basepeak = yes

765.roms_r: basepeak = yes

Benchmarks using both C and C++:

709.cactus_r: basepeak = yes

```
737.gmsh_r: -m64 -std=c++17 -std=c18 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xHost(pass 1)
-ffp-model=fast -xgraniterapids(pass 2) -flto
-mprefer-vector-width=512 -qopt-mem-layout-trans=4 -O3
-mfpmath=sse -funroll-loops
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc
```

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

<http://www.spec.org/cpu2026/results/flags/Intel-ic2025-official-linux64-cpu2026-0.902.html>
<http://www.spec.org/cpu2026/results/flags/Dell-Platform-Flags-PowerEdge-Intel-Xeon-v1.19.html>

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

<http://www.spec.org/cpu2026/results/flags/Intel-ic2025-official-linux64-cpu2026-0.902.xml>
<http://www.spec.org/cpu2026/results/flags/Dell-Platform-Flags-PowerEdge-Intel-Xeon-v1.19.xml>

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