



SPEC CPU®2026 Floating Point Speed Result

Copyright 2026 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2026_fp_base = 7.53

PowerEdge R770 (Intel Xeon 6780E)

SPECspeed®2026_fp_peak = 7.70

CPU2026 License: 6573

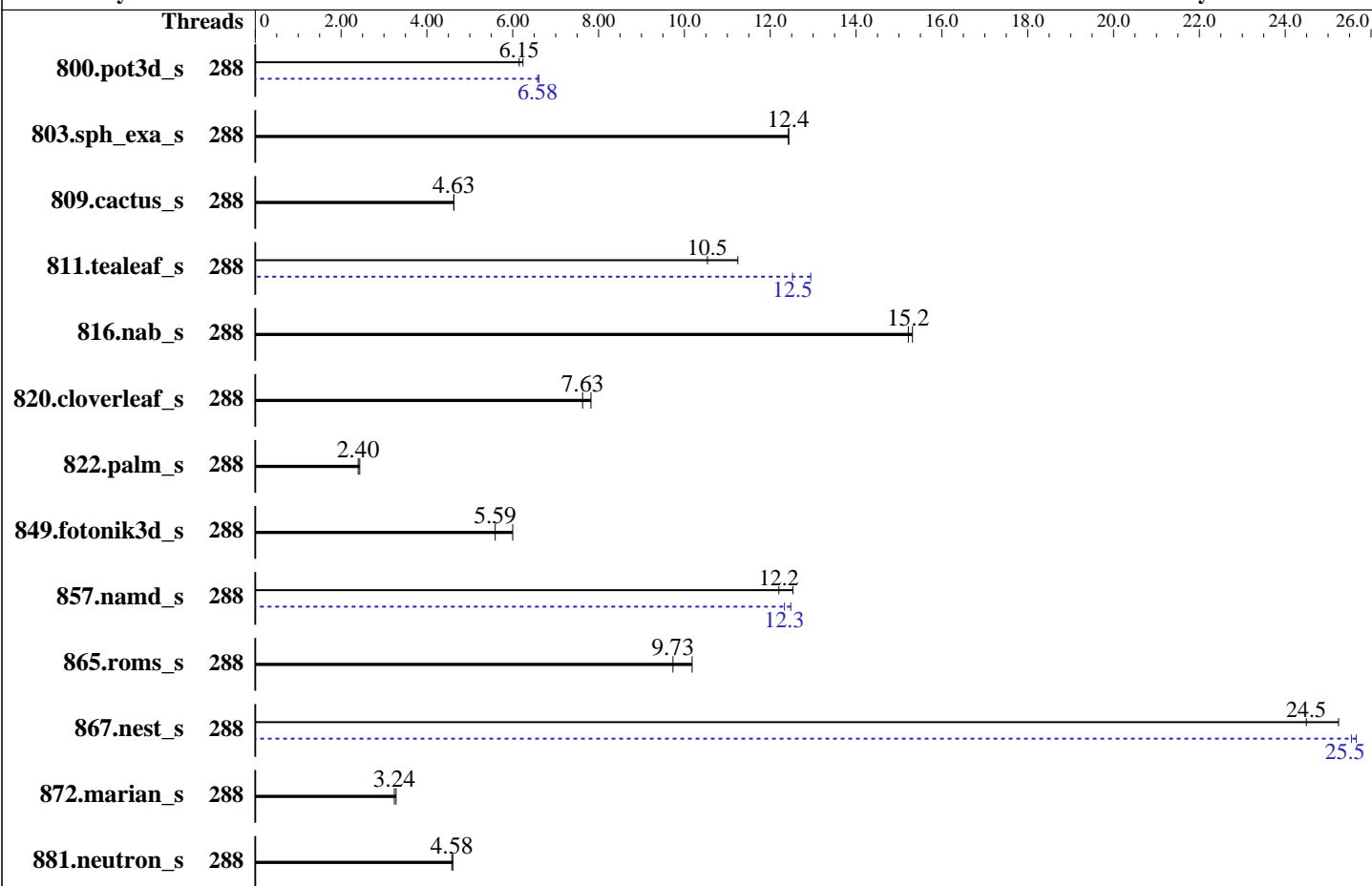
Test Date: Feb-2026

Test Sponsor: Dell Inc.

Hardware Availability: Mar-2025

Tested by: Dell Inc.

Software Availability: Nov-2025



Hardware

CPU Name: Intel Xeon 6780E
 Max MHz: 3000
 Nominal: 2200
 Enabled: 288 cores, 2 chips
 Orderable: 1,2 chips
 Cache L1: 64 KB I + 32 KB D on chip per core
 L2: 4 MB I+D on chip per core
 L3: 108 MB I+D on chip per chip
 Other: None
 Memory: 1 TB (16 x 64 GB 2Rx4 PC5-6400B-R)
 Storage: 160 GB on tmpfs
 Cooling: Air
 Other: None

Software

OS: SUSE Linux Enterprise Server 15 SP6
 6.4.0-150600.21-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 1.6.4 released Nov-2025
 File System: tmpfs
 System State: Run level 3 (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							
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
800.pot3d_s	288	109	6.15	108	6.24			288	102	6.61	102	6.58		
803.sph_exa_s	288	99.7	12.4	99.6	12.4			288	99.7	12.4	99.6	12.4		
809.cactus_s	288	243	4.63	242	4.63			288	243	4.63	242	4.63		
811.tealeaf_s	288	52.9	10.5	49.5	11.2			288	44.5	12.5	43.0	12.9		
816.nab_s	288	74.0	15.2	73.5	15.3			288	74.0	15.2	73.5	15.3		
820.cloverleaf_s	288	110	7.82	112	7.63			288	110	7.82	112	7.63		
822.palm_s	288	512	2.40	504	2.44			288	512	2.40	504	2.44		
849.fotonik3d_s	288	110	6.00	118	5.59			288	110	6.00	118	5.59		
857.namd_s	288	116	12.5	119	12.2			288	116	12.5	118	12.3		
865.roms_s	288	112	9.73	107	10.2			288	112	9.73	107	10.2		
867.nest_s	288	85.6	25.2	88.2	24.5			288	84.2	25.7	84.6	25.5		
872.marian_s	288	334	3.24	330	3.28			288	334	3.24	330	3.28		
881.neutron_s	288	178	4.58	177	4.60			288	178	4.58	177	4.60		

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

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/cpu2026-RC2/lib"
MALLOCONF = "retain:true"
OMP_STACKSIZE = "192M"

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
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 160 GB ramdisk created with the cmd: "mount -t tmpfs -o size=160G tmpfs /mnt/ramdisk"



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Platform Notes

BIOS Settings:

```

System Profile : Custom
CPU Power Management : Maximum Performance
    C1E : Disabled
    C-States : Autonomous
Latency Optimized Mode : Enabled
Energy Efficient Policy : Performance
    DIMM Self Healing -
on Uncorrectable Memory Error : Disabled

```

```

Sysinfo program /mnt/ramdisk/cpu2026-RC2/bin/sysinfo
Rev: 069f95da7e7f5d81b2ce48a82150e54f
running on W407216-R770 Fri Feb 6 12:41:10 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 (254.10+suse.84.ge8d77af424)
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 -srvm

(Continued on next page)



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Platform Notes (Continued)

Linux 6.4.0-150600.21-default #1 SMP PREEMPT_DYNAMIC Thu May 16 11:09:22 UTC 2024 (36c1e09) x86_64

```

-----
2. w
   12:41:10 up 4 min,  1 user,  load average: 0.56, 0.35, 0.16
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU WHAT
root      tty1     -             12:38    1:01   1.89s  0.00s /bin/bash
/home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=7.0_T04 --output_format html,pdf,txt

```

```

-----
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) 4126060
   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) 4126060
   virtual memory          (kbytes, -v) unlimited
   file locks              (-x) unlimited

```

```

-----
5. sysinfo process ancestry
   /usr/lib/systemd/systemd --switched-root --system --deserialize=42
   login -- root
   -bash
   /bin/bash /home/DellFiles/bin/DELL_speed.sh
   /bin/bash /home/DellFiles/bin/dell-run-main.sh speed
   /bin/bash /home/DellFiles/bin/dell-run-main.sh speed
   /bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=7.0_T04 --output_format
   html,pdf,txt
   /bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=7.0_T04 --output_format
   html,pdf,txt
   runcpu --nobuild --reportable --action validate --define default-platform-flags -c
   ic2025.3-sierraforest-cpu2026-0.902-speed-20260121.cfg --threads 288 --define cores=288 --tune base,peak
   -o all --define smt-on --define drop_caches --iterations 2 --define DL-VERS=7.0_T04 --output_format

```

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Platform Notes (Continued)

```

html, pdf, txt fpspeed
runcpu --nobuild --reportable --action validate --define default-platform-flags --configfile
ic2025.3-sierraforest-cpu2026-0.902-speed-20260121.cfg --threads 288 --define cores=288 --tune base,peak
--output_format all --define smt-on --define drop_caches --iterations 2 --define DL-VERS=7.0_T04
--output_format html, pdf, txt --nopower --runmode speed --tune base:peak --size refspeed fpspeed --nopreenv
--note-preenv --logfile $SPEC/tmp/CPU2026.001/templogs/preenv.fpspeed.001.0.log --lognum 001.0
--from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2026-RC2

```

```

-----
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6780E
vendor_id      : GenuineIntel
cpu family     : 6
model          : 175
stepping       : 3
microcode      : 0x3000382
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
cpu cores      : 144
siblings       : 144
2 physical ids (chips)
288 processors (hardware threads)
physical id 0: core ids 0-143
physical id 1: core ids 0-143
physical id 0: apicids
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, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 1
32, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 18
4, 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, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286
physical id 1: apicids
512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 5
64, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 61
6, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668
, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720,
722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 7
74, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798

```

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 2.39.3:
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit

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(Continued on next page)



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Platform Notes (Continued)

Address sizes: 52 bits physical, 48 bits virtual
 Byte Order: Little Endian
 CPU(s): 288
 On-line CPU(s) list: 0-287
 Vendor ID: GenuineIntel
 BIOS Vendor ID: Intel
 Model name: Intel(R) Xeon(R) 6780E
 BIOS Model name: Intel(R) Xeon(R) 6780E CPU @ 2.2GHz
 BIOS CPU family: 179
 CPU family: 6
 Model: 175
 Thread(s) per core: 1
 Core(s) per socket: 144
 Socket(s): 2
 Stepping: 3
 BogoMIPS: 4400.00
 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 rdseed adx smap clflushopt clwb intel_pt sha_ni xsaveopt xsavec
 xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
 split_lock_detect user_shstk avx_vnni lam wbnoinvd dtherm ida arat
 pln pts vnmi umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid
 bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm md_clear
 serialize pconfig arch_lbr ibt flush_lld arch_capabilities
 Virtualization: VT-x
 L1d cache: 9 MiB (288 instances)
 L1i cache: 18 MiB (288 instances)
 L2 cache: 288 MiB (72 instances)
 L3 cache: 216 MiB (2 instances)
 NUMA node(s): 2
 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, 86, 88, 90, 92, 94
 , 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 13
 0, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164
 , 166, 168, 170, 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, 2
 34, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 26
 8, 270, 272, 274, 276, 278, 280, 282, 284, 286
 NUMA node1 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

(Continued on next page)



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Platform Notes (Continued)

,51,53,55,57,59,61,63,65,67,69,71,73,75,77,79,81,83,85,87,89,91,93,95
,97,99,101,103,105,107,109,111,113,115,117,119,121,123,125,127,129,13
1,133,135,137,139,141,143,145,147,149,151,153,155,157,159,161,163,165
,167,169,171,173,175,177,179,181,183,185,187,189,191,193,195,197,199,
201,203,205,207,209,211,213,215,217,219,221,223,225,227,229,231,233,2
35,237,239,241,243,245,247,249,251,253,255,257,259,261,263,265,267,26
9,271,273,275,277,279,281,283,285,287

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;
PBR SB-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	32K	9M	8	Data	1	64	1	64
L1i	64K	18M	8	Instruction	1	128	1	64
L2	4M	288M	16	Unified	2	4096	1	64
L3	108M	216M	12	Unified	3	147456	1	64

8. numactl --hardware

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

available: 2 nodes (0-1)

node 0 cpus:

0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62,64,66,68,70,72,7
4,76,78,80,82,84,86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,118,120,122,124,126,128,130,132,1
34,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,170,172,174,176,178,180,182,184,186,
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
,242,244,246,248,250,252,254,256,258,260,262,264,266,268,270,272,274,276,278,280,282,284,286

node 0 size: 515597 MB

node 0 free: 487507 MB

node 1 cpus:

1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49,51,53,55,57,59,61,63,65,67,69,71,73,7
5,77,79,81,83,85,87,89,91,93,95,97,99,101,103,105,107,109,111,113,115,117,119,121,123,125,127,129,131,133,1
35,137,139,141,143,145,147,149,151,153,155,157,159,161,163,165,167,169,171,173,175,177,179,181,183,185,187,
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

(Continued on next page)



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, 243, 245, 247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277, 279, 281, 283, 285, 287

node 1 size: 515944 MB

node 1 free: 514707 MB

node distances:

```
node 0 1
0: 10 21
1: 21 10
```

9. /proc/meminfo
MemTotal: 1056298448 kB

10. who -r
run-level 3 Feb 6 12:37

11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)
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 display-manager getty@ irqbalance issue-generator kbdsettings klog lvm2-monitor nscd 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 firewallld 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-sysext systemd-time-wait-sync systemd-timesyncd udisks2 vncserver@
indirect	systemd-userdbd wickedd

13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
root=UUID=e81515a8-96ce-43a6-8780-d2ae771756fe
splash=silent
mitigations=auto
quiet
security=apparmor

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Platform Notes (Continued)

```

14. cpupower frequency-info
   analyzing CPU 118:
     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
   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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SPEC CPU®2026 Floating Point Speed Result

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Dell Inc.

SPECspeed®2026_fp_base = 7.53

PowerEdge R770 (Intel Xeon 6780E)

SPECspeed®2026_fp_peak = 7.70

CPU2026 License: 6573
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

Test Date: Feb-2026
Hardware Availability: Mar-2025
Software Availability: Nov-2025

Platform Notes (Continued)

18. OS release
From /etc/*-release /etc/*-version
os-release SUSE Linux Enterprise Server 15 SP6

19. Disk information
SPEC is set to: /mnt/ramdisk/cpu2026-RC2
Filesystem Type Size Used Avail Use% Mounted on
tmpfs tmpfs 160G 13G 148G 9% /mnt/ramdisk

20. /sys/devices/virtual/dmi/id
Vendor: Dell Inc.
Product: PowerEdge R770
Product Family: PowerEdge
Serial: W407216

21. dmidecode
Additional information from dmidecode 3.4 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:
6x 00AD042300AD HMC94AHBRA480N 64 GB 2 rank 6400
10x 00AD063200AD HMC94AHBRA277N 64 GB 2 rank 6400

22. BIOS
(This section combines info from /sys/devices and dmidecode.)
BIOS Vendor: Dell Inc.
BIOS Version: 1.6.4
BIOS Date: 11/02/2025
BIOS Revision: 1.6

Compiler Version Notes

C | 811.tealeaf_s(base, peak) 816.nab_s(base, peak) 881.neutron_s(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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(Continued on next page)



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Compiler Version Notes (Continued)

```

=====
C++      | 803.sph_exa_s(base, peak) 857.namd_s(base, peak) 867.nest_s(base,
        | peak) 872.marian_s(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   | 809.cactus_s(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  | 800.pot3d_s(base, peak) 820.cloverleaf_s(base, peak)
        | 822.palm_s(base, peak) 849.fotonik3d_s(base, peak) 865.roms_s(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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Tested by: Dell Inc.

Test Date: Feb-2026

Hardware Availability: Mar-2025

Software Availability: Nov-2025

Base Portability Flags

```

800.pot3d_s: -DSPEC_LP64
803.sph_exa_s: -DSPEC_LP64
809.cactus_s: -DSPEC_LP64
811.tealeaf_s: -DSPEC_LP64
816.nab_s: -DSPEC_LP64
820.cloverleaf_s: -DSPEC_LP64
822.palm_s: -DSPEC_LP64
849.fotonik3d_s: -DSPEC_LP64
857.namd_s: -DSPEC_LP64
865.roms_s: -DSPEC_LP64
867.nest_s: -DSPEC_LP64
872.marian_s: -DSPEC_LP64
881.neutron_s: -DSPEC_LP64

```

Base Optimization Flags

C benchmarks:

```

-m64 -std=c18 -Wl,-z,muldefs -xsierraforest -O3 -ffp-model=fast
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -L/usr/local/jemalloc-5.3.0/lib -ljemalloc

```

C++ benchmarks:

```

803.sph_exa_s: -m64 -std=c++17 -Wl,-z,muldefs -xsierraforest -O3
-ffp-model=fast -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

```

857.namd_s: Same as 803.sph_exa_s

867.nest_s: Same as 803.sph_exa_s

```

872.marian_s: -m64 -std=c++17 -Wl,-z,muldefs -xsierraforest -O3
-ffp-model=fast -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -pthread
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

```

Fortran benchmarks:

```

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

```

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Hardware Availability: Mar-2025

Software Availability: Nov-2025

Base Optimization Flags (Continued)

Benchmarks using both C and C++:

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

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:

```
811.tealeaf_s: -m64 -std=c18 -Wl,-z,muldefs -fiopenmp -DSPEC_OPENMP
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc
```

816.nab_s: basepeak = yes

881.neutron_s: basepeak = yes

C++ benchmarks:

803.sph_exa_s: basepeak = yes

(Continued on next page)



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Software Availability: Nov-2025

Peak Optimization Flags (Continued)

857.namd_s: -m64 -std=c++17 -Wl,-z,muldefs -fiopenmp -DSPEC_OPENMP
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

867.nest_s: Same as 857.namd_s

872.marian_s: basepeak = yes

Fortran benchmarks:

800.pot3d_s: -m64 -stand f18 -Wl,-z,muldefs -DSPEC_OPENMP -fiopenmp
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

820.cloverleaf_s: basepeak = yes

822.palm_s: basepeak = yes

849.fotonik3d_s: basepeak = yes

865.roms_s: basepeak = yes

Benchmarks using both C and C++:

809.cactus_s: basepeak = yes

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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