SPEC CPU®2026 Floating Point Speed Result

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Dell Inc.

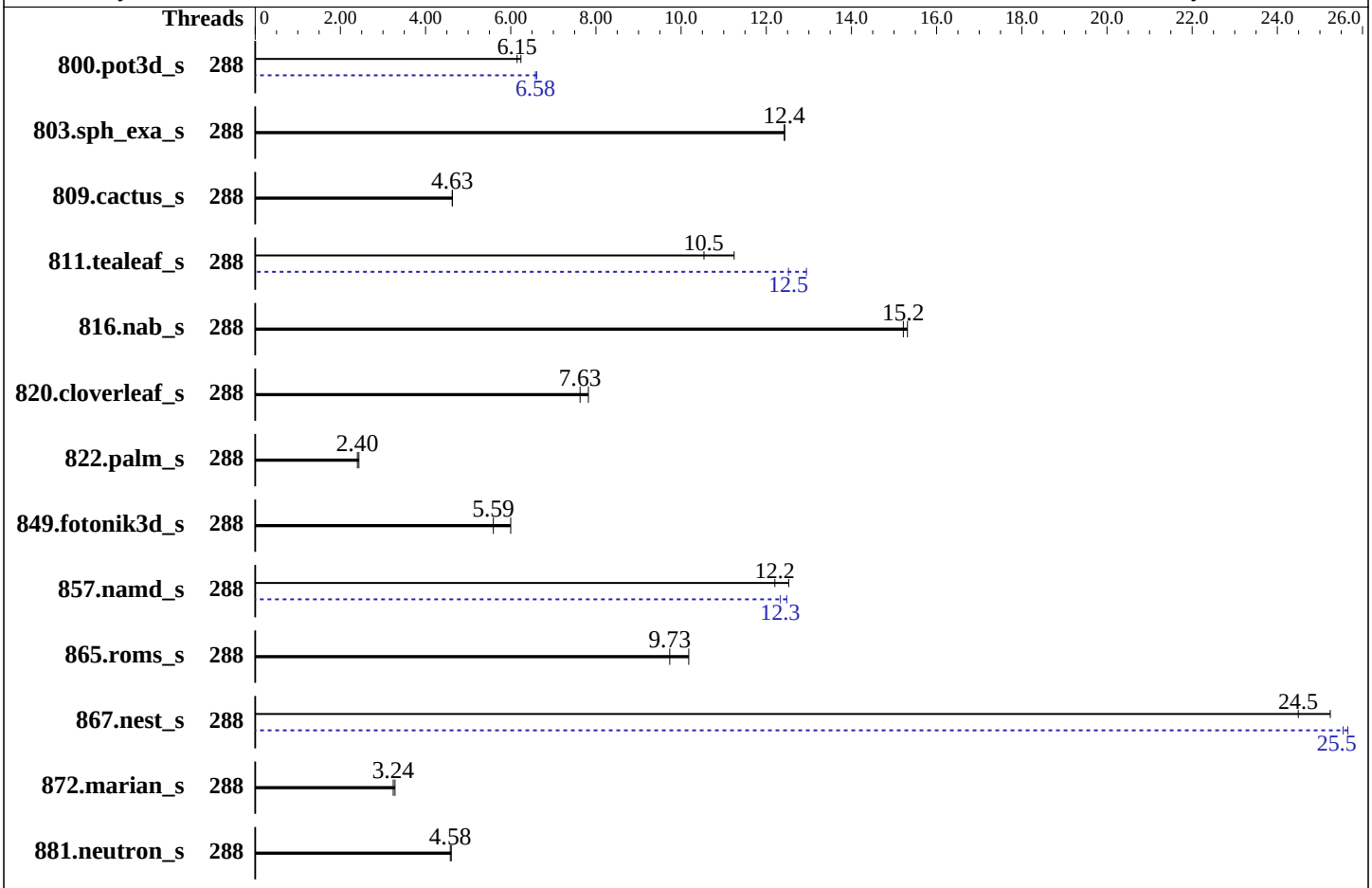
PowerEdge R770 (Intel Xeon 6780E)

SPECspeed®2026_fp_base = 7.53

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



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		

SPECspeed®2026_fp_base = **7.53**

SPECspeed®2026_fp_peak = **7.70**

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"
MALLOC_CONF = "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"
```

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.

------------------------------------------------------------
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------------------------------------------------------------
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 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
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------------------------------------------------------------

------------------------------------------------------------
1. uname -srvm
```

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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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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_l1d 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
```

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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/swapgs barriers and __user pointer sanitization
  Vulnerability Spectre v2:             Mitigation; Enhanced / Automatic IBRS; IBPB conditional; RSB filling;
                                        PBRSB-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
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Platform Notes (Continued)

```
  ,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 ebtables exchange-bmc-os-info
                  firewalld fsidd gpm grub2-once haveged ipmi ipmievd issue-add-ssh-keys kexec-load lunmask
                  man-db-create multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd serial-getty@
                  smartd_generate_opts snmpd snmptrapd systemd-boot-check-no-failures systemd-confext
                  systemd-network-generator systemd-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+madvise [madvise] never
  enabled         [always] madvise 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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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 HMCG94AHBRA480N 64 GB 2 rank 6400
      10x 00AD063200AD HMCG94AHBRA277N 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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------------------------------------------------------------------------------
```

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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
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------------------------------------------------------------------------------

==============================================================================
C++, C  | 809.cactus_s(base, peak)
------------------------------------------------------------------------------
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  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
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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

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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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

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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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