# SPEC CPU®2026 Floating Point Speed Result

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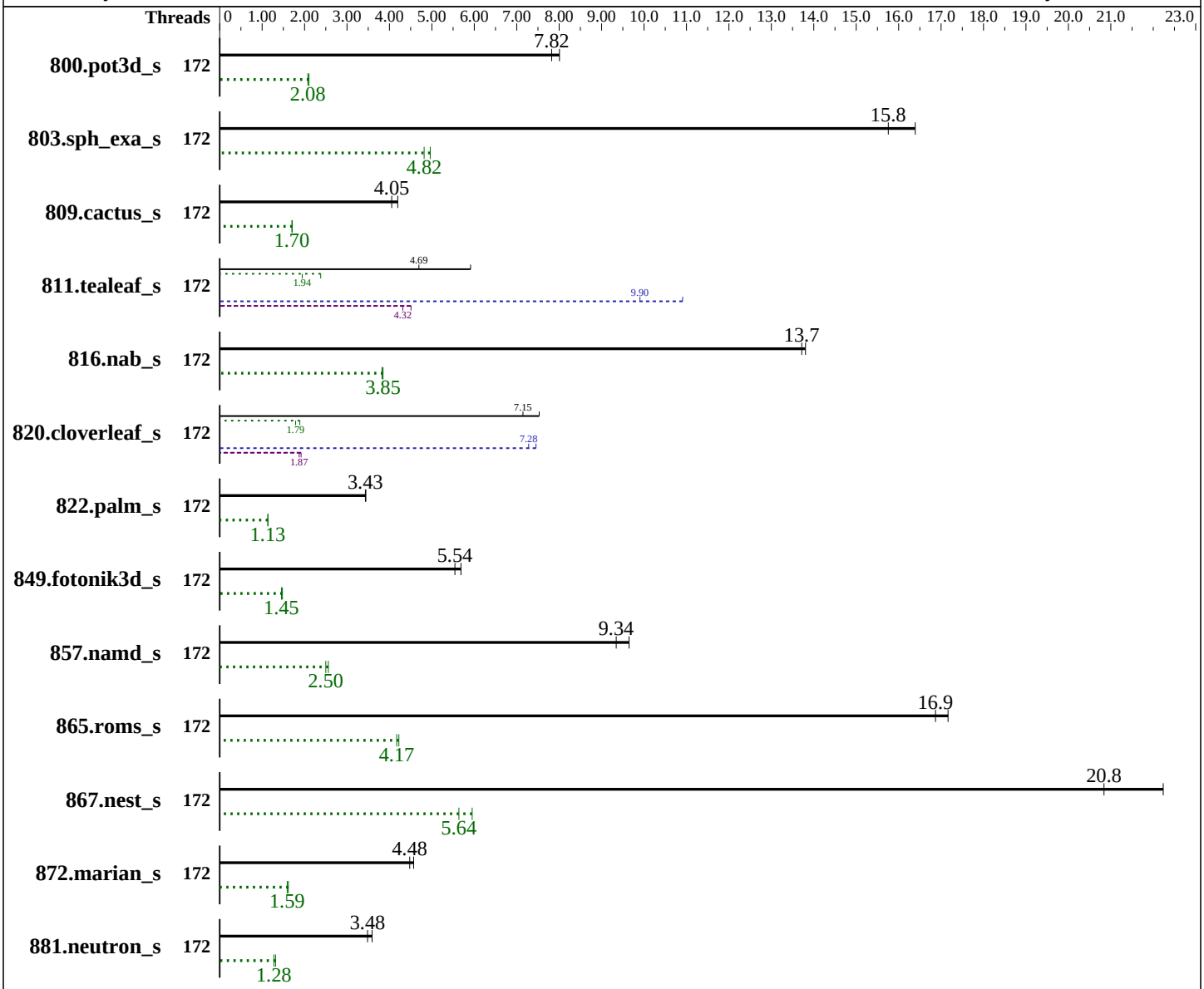
## Dell Inc.

## PowerEdge R770 (Intel Xeon 6787P)

| | |
|---|---|
| SPECspeed®2026_fp_base = | 7.47 |
| SPECspeed®2026_fp_energy_base = | 2.28 |
| SPECspeed®2026_fp_peak = | 7.92 |
| SPECspeed®2026_fp_energy_peak = | 2.43 |

**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 6787P
Max MHz: 3800
Nominal: 2000
Enabled: 172 cores, 2 chips
Orderable: 1,2 chips

(Continued on next page)

## Software

OS: SUSE Linux Enterprise Server 15 SP6
6.4.0-150600.21-default

(Continued on next page)

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### Hardware (Continued)

| | |
|---|---|
| Cache L1: | 64 KB I + 48 KB D on chip per core |
| L2: | 2 MB I+D on chip per core |
| L3: | 336 MB I+D on chip per chip |
| Other: | None |
| Memory: | 1 TB (16 x 64 GB 2Rx4 PC5-6400B-R, running at 4800) |
| Storage: | 120 GB on tmpfs |
| Cooling: | Air |
| Other: | CPU Cooling : Air |

### Software (Continued)

| | |
|---|---|
| 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 and OS set to balanced performance |

### Power

| | |
|---|---|
| Max. Power (W): | 909.7 |
| Idle Power (W): | 177.51 |
| Min. Temperature (C): | 21.50 |
| Elevation (m): | 255 |
| Line Standard: | 220 V / 50 Hz / 1 phase / 3 wires |
| Provisioning: | Line-powered |

### Power Settings

| | |
|---|---|
| Management FW: | Version 1.20.80.50 of IDRAC |
| Memory Mode: | Normal |

### Power-Relevant Hardware

| | |
|---|---|
| Power Supply: | 1 x 1500 W (non-redundant) |
| Details: | 1500W Titanium Power supply DPN 1PKMH |
| Backplane: | 8 x EDSFF E3.S NVMe |
| Other Storage: | 1 x NVMe E3 Drive |
| Storage Model #s: | NVMe PM1745 MU E3.S 3.2TB |
| NICs Installed: | 1 x Intel E610-XT2 @ 10 Gbps (Dell P/N FC0HK) |
| NICs Enabled (FW/OS): | 2 / 1 |
| NICs Connected/Speed: | 1 @ 10 Gb |
| Other HW Model #s: | 6 x performance fans |

### Power Analyzer

| | |
|---|---|
| Power Analyzer: | 192.168.0.5:8888 |
| Hardware Vendor: | Yokogawa Meters and Instruments Corporation |
| Model: | YokogawaWT310E |
| Serial Number: | T11733386 |
| Input Connection: | Default |
| Metrology Institute: | Tescom |
| Calibration By: | NIST |
| Calibration Label: | T126623 |
| Calibration Date: | 13-Aug-2025 |
| PTDaemon® Version: | 1.11.4 (5bcc369b; 2026-01-19) |
| Setup Description: | Connected to PSU1 |
| Current Ranges Used: | 10A |
| Voltage Range Used: | 300V |

### Temperature Meter

| | |
|---|---|
| Temperature Meter: | 192.168.0.5:8889 |
| Hardware Vendor: | Digi International Inc. |
| Model: | DigiWATCHPORT_H |
| Serial Number: | W13370940 |
| Input Connection: | USB |
| PTDaemon Version: | 1.11.4 (5bcc369b; 2026-01-19) |
| Setup Description: | 25 mm in front of SUT main airflow intake |

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

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

## Base Results Table

| Benchmark | Threads | Seconds | Ratio | Energy (kJ) | Energy Ratio | Average Power | Maximum Power | Seconds | Ratio | Energy (kJ) | Energy Ratio | Average Power | Maximum Power | Seconds | Ratio | Energy (kJ) | Energy Ratio | Average Power | Maximum Power |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 800.pot3d_s | 172 | **86.0** | **7.82** | **60.8** | **2.08** | **706** | **857** | 84.1 | 8.01 | 60.0 | 2.10 | 714 | 847 | | | | | | |
| 803.sph_exa_s | 172 | **78.6** | **15.8** | **43.5** | **4.82** | **553** | **714** | 75.5 | 16.4 | 42.2 | 4.96 | 559 | 722 | | | | | | |
| 809.cactus_s | 172 | 267 | 4.20 | 118 | 1.71 | 442 | 538 | **277** | **4.05** | **119** | **1.70** | **430** | **534** | | | | | | |
| 811.tealeaf_s | 172 | 94.2 | 5.91 | 58.7 | 2.38 | 623 | 672 | **119** | **4.69** | **71.8** | **1.94** | **605** | **670** | | | | | | |
| 816.nab_s | 172 | **82.1** | **13.7** | **50.2** | **3.85** | **611** | **627** | 81.6 | 13.8 | 50.5 | 3.82 | 619 | 632 | | | | | | |
| 820.cloverleaf_s | 172 | 114 | 7.53 | 88.2 | 1.89 | 775 | 802 | **120** | **7.15** | **93.1** | **1.79** | **776** | **806** | | | | | | |
| 822.palm_s | 172 | 356 | 3.44 | 183 | 1.14 | 512 | 628 | **358** | **3.43** | **183** | **1.13** | **511** | **632** | | | | | | |
| 849.fotonik3d_s | 172 | **119** | **5.54** | **84.7** | **1.45** | **711** | **793** | 116 | 5.69 | 83.3 | 1.48 | 718 | 800 | | | | | | |
| 857.namd_s | 172 | **155** | **9.34** | **106** | **2.50** | **684** | **712** | 151 | 9.65 | 104 | 2.56 | 690 | 718 | | | | | | |
| 865.roms_s | 172 | 63.5 | 17.2 | 54.8 | 4.22 | 863 | 905 | **64.6** | **16.9** | **55.5** | **4.17** | **859** | **900** | | | | | | |
| 867.nest_s | 172 | **104** | **20.8** | **68.6** | **5.64** | **662** | **773** | 97.1 | 22.2 | 65.0 | 5.95 | 669 | 772 | | | | | | |
| 872.marian_s | 172 | **242** | **4.48** | **101** | **1.59** | **420** | **845** | 237 | 4.57 | 99.7 | 1.62 | 421 | 847 | | | | | | |
| 881.neutron_s | 172 | 227 | 3.59 | 99.9 | 1.32 | 440 | 793 | **234** | **3.48** | **103** | **1.28** | **440** | **742** | | | | | | |

**SPECspeed®2026_fp_base = 7.47**

**SPECspeed®2026_fp_energy_base = 2.28**

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

## Peak Results Table

| Benchmark | Threads | Seconds | Ratio | Energy (kJ) | Energy Ratio | Average Power | Maximum Power | Seconds | Ratio | Energy (kJ) | Energy Ratio | Average Power | Maximum Power | Seconds | Ratio | Energy (kJ) | Energy Ratio | Average Power | Maximum Power |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 800.pot3d_s | 172 | **86.0** | **7.82** | **60.8** | **2.08** | **706** | **857** | 84.1 | 8.01 | 60.0 | 2.10 | 714 | 847 | | | | | | |
| 803.sph_exa_s | 172 | **78.6** | **15.8** | **43.5** | **4.82** | **553** | **714** | 75.5 | 16.4 | 42.2 | 4.96 | 559 | 722 | | | | | | |
| 809.cactus_s | 172 | 267 | 4.20 | 118 | 1.71 | 442 | 538 | **277** | **4.05** | **119** | **1.70** | **430** | **534** | | | | | | |
| 811.tealeaf_s | 172 | 51.1 | 10.9 | 31.0 | 4.51 | 607 | 651 | **56.2** | **9.90** | **32.4** | **4.32** | **575** | **650** | | | | | | |
| 816.nab_s | 172 | **82.1** | **13.7** | **50.2** | **3.85** | **611** | **627** | 81.6 | 13.8 | 50.5 | 3.82 | 619 | 632 | | | | | | |
| 820.cloverleaf_s | 172 | 115 | 7.45 | 86.8 | 1.92 | 755 | 774 | **118** | **7.28** | **88.9** | **1.87** | **755** | **781** | | | | | | |
| 822.palm_s | 172 | 356 | 3.44 | 183 | 1.14 | 512 | 628 | **358** | **3.43** | **183** | **1.13** | **511** | **632** | | | | | | |
| 849.fotonik3d_s | 172 | **119** | **5.54** | **84.7** | **1.45** | **711** | **793** | 116 | 5.69 | 83.3 | 1.48 | 718 | 800 | | | | | | |
| 857.namd_s | 172 | **155** | **9.34** | **106** | **2.50** | **684** | **712** | 151 | 9.65 | 104 | 2.56 | 690 | 718 | | | | | | |
| 865.roms_s | 172 | 63.5 | 17.2 | 54.8 | 4.22 | 863 | 905 | **64.6** | **16.9** | **55.5** | **4.17** | **859** | **900** | | | | | | |
| 867.nest_s | 172 | **104** | **20.8** | **68.6** | **5.64** | **662** | **773** | 97.1 | 22.2 | 65.0 | 5.95 | 669 | 772 | | | | | | |
| 872.marian_s | 172 | **242** | **4.48** | **101** | **1.59** | **420** | **845** | 237 | 4.57 | 99.7 | 1.62 | 421 | 847 | | | | | | |
| 881.neutron_s | 172 | 227 | 3.59 | 99.9 | 1.32 | 440 | 793 | **234** | **3.48** | **103** | **1.28** | **440** | **742** | | | | | | |

**SPECspeed®2026_fp_peak = 7.92**

**SPECspeed®2026_fp_energy_peak = 2.43**

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/cpu2026rc2/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 120 GB ramdisk created with the cmd: "mount -t tmpfs -o size=120G tmpfs /mnt/ramdisk"
```

## Platform Notes

```
BIOS Settings:
         Logical Processor : Disabled
 Virtualization Technology : Disabled
       Hardware Prefetcher : Disabled
          Sub NUMA Cluster : Enabled
     MADT Core Enumeration : Linear

            System Profile : Custom
      CPU Power Management : OS DBPM
          Memory Frequency : Maximum Reliability
               Turbo Boost : Disabled
    Energy Efficient Turbo : Disabled
    Latency Optimized Mode : Enabled
   Energy Efficient Policy : Energy Efficient
             ADDDC Setting : Disabled
       DIMM Self Healing -
on Uncorrectable Memory Error : Disabled

Sysinfo program /mnt/ramdisk/cpu2026rc2/bin/sysinfo
Rev: 069f95da7e7f5d81b2ce48a82150e54f
running on B2KQ54-R770 Fri Feb  6 01:17:07 2026

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

------------------------------------------------------------
Table of contents
------------------------------------------------------------
 1. uname -srvm
 2. w
 3. Username
```

**(Continued on next page)**

## Platform Notes (Continued)

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

------------------------------------------------------------
2. w
   01:17:07 up  9:31,  1 user,  load average: 10.23, 28.96, 23.37
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
  root     tty1     -                15:47    5:07m  3.62s  0.00s /bin/bash
  /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=7.0_T01 --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) 4126573
  max locked memory       (kbytes, -l) 8192
  max memory size         (kbytes, -m) unlimited
```

**(Continued on next page)**

## Platform Notes (Continued)

```
   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) 4126573
   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_T01 --output_format
    html,pdf,txt
 /bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=7.0_T01 --output_format
    html,pdf,txt
 runcpu --nobuild --reportable --action validate --define default-platform-flags -c
   ic2025.3-graniterapids-cpu2026-0.902-speed-20260121.cfg --threads 172 --define cores=172 --tune base,peak
   -o all --define drop_caches --iterations 2 --define DL-VERS=7.0_T01 --output_format html,pdf,txt fpspeed
 runcpu --nobuild --reportable --action validate --define default-platform-flags --configfile
   ic2025.3-graniterapids-cpu2026-0.902-speed-20260121.cfg --threads 172 --define cores=172 --tune base,peak
    --output_format all --define drop_caches --iterations 2 --define DL-VERS=7.0_T01 --output_format
   html,pdf,txt --runmode speed --tune base:peak --size refspeed fpspeed --nopreenv --note-preenv --logfile
    $SPEC/tmp/CPU2026.002/templogs/preenv.fpspeed.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) 6787P
    vendor_id       : GenuineIntel
    cpu family      : 6
    model           : 173
    stepping        : 1
    microcode       : 0x10003f3
    bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
    cpu cores       : 86
    siblings        : 86
    2 physical ids (chips)
```

**(Continued on next page)**

## Platform Notes (Continued)

```
     172 processors (hardware threads)
     physical id 0: core ids 0-42,64-106
     physical id 1: core ids 0-42,64-106
     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
    ,74,76,78,80,82,84,128,130,132,134,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,17
     0,172,174,176,178,180,182,184,186,188,190,192,194,196,198,200,202,204,206,208,210,212
     physical id 1: apicids
    256,258,260,262,264,266,268,270,272,274,276,278,280,282,284,286,288,290,292,294,296,298,300,302,304,306,3
    08,310,312,314,316,318,320,322,324,326,328,330,332,334,336,338,340,384,386,388,390,392,394,396,398,400,40
    2,404,406,408,410,412,414,416,418,420,422,424,426,428,430,432,434,436,438,440,442,444,446,448,450,452,454
     ,456,458,460,462,464,466,468
   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
  Address sizes:                        52 bits physical, 57 bits virtual
  Byte Order:                           Little Endian
  CPU(s):                               172
  On-line CPU(s) list:                  0-171
  Vendor ID:                            GenuineIntel
  BIOS Vendor ID:                       Intel
  Model name:                           Intel(R) Xeon(R) 6787P
  BIOS Model name:                      Intel(R) Xeon(R) 6787P  CPU @ 2.0GHz
  BIOS CPU family:                      179
  CPU family:                           6
  Model:                                173
  Thread(s) per core:                   1
  Core(s) per socket:                   86
  Socket(s):                            2
  Stepping:                             1
  CPU(s) scaling MHz:                   40%
  CPU max MHz:                          2000.0000
  CPU min MHz:                          800.0000
  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 aperfmperf tsc_known_freq pni
                                        pclmulqdq dtes64 monitor ds_cpl smx est tm2 ssse3 sdbg fma cx16 xtpr
```

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## Platform Notes (Continued)

```
                                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 fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms
                                invpcid rtm 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 arat pln pts hwp hwp_act_window hwp_epp hwp_pkg_req
                               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
  L1d cache:                             8.1 MiB (172 instances)
  L1i cache:                             10.8 MiB (172 instances)
  L2 cache:                              344 MiB (172 instances)
  L3 cache:                              672 MiB (2 instances)
  NUMA node(s):                          4
  NUMA node0 CPU(s):                     0-42
  NUMA node1 CPU(s):                     43-85
  NUMA node2 CPU(s):                     86-128
  NUMA node3 CPU(s):                     129-171
  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       48K     8.1M   12 Data            1     64        1             64
      L1i       64K    10.8M   16 Instruction     1     64        1             64
      L2         2M     344M   16 Unified         2   2048        1             64
      L3       336M     672M   16 Unified         3 344064        1             64
```

**(Continued on next page)**

## Platform Notes (Continued)

```
------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 4 nodes (0-3)
  node 0 cpus: 0-42
  node 0 size: 257600 MB
  node 0 free: 243444 MB
  node 1 cpus: 43-85
  node 1 size: 258036 MB
  node 1 free: 257430 MB
  node 2 cpus: 86-128
  node 2 size: 258036 MB
  node 2 free: 243885 MB
  node 3 cpus: 129-171
  node 3 size: 257996 MB
  node 3 free: 257121 MB
  node distances:
  node   0   1   2   3
    0:  10  12  21  21
    1:  12  10  21  21
    2:  21  21  10  12
    3:  21  21  12  10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       1056429864 kB

------------------------------------------------------------
10. who -r
  run-level 3 Feb 5 15:46

------------------------------------------------------------
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 nvmefc-boot-connections
                   nvmf-autoconnect postfix purge-kernels rollback rsyslog smartd sshd systemd-pstore wicked
                   wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
  enabled-runtime  systemd-remount-fs
```

**(Continued on next page)**

## Platform Notes (Continued)

```
  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=02b3adac-b4ec-425b-b06d-e66675474f80
  splash=silent
  mitigations=auto
  quiet
  security=apparmor

------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 17:
    current policy: frequency should be within 800 MHz and 2.00 GHz.
                    The governor "powersave" may decide which speed to use
                    within this range.
    boost state support:
      Supported: no
      Active: no

------------------------------------------------------------
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
```

**(Continued on next page)**

## Platform Notes (Continued)

```
  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

------------------------------------------------------------
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/cpu2026rc2
  Filesystem     Type   Size  Used Avail Use% Mounted on
  tmpfs          tmpfs  120G   13G  108G  11% /mnt/ramdisk

------------------------------------------------------------
20. /sys/devices/virtual/dmi/id
    Vendor:         Dell Inc.
    Product:        PowerEdge R770
    Product Family: PowerEdge
    Serial:         5B2KQ54

------------------------------------------------------------
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
```

**(Continued on next page)**

## Platform Notes (Continued)

```
   "DMTF SMBIOS" standard.
   Memory:
     16x 002C069D002C MTC40F2046S1RC64BD2 QSFF 64 GB 2 rank 6400, configured at 4800


 ------------------------------------------------------------
 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
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
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
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
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,
```

**(Continued on next page)**

## Compiler Version Notes (Continued)

```
        | 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

## 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 -xgraniterapids
-mprefer-vector-width=512 -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 -xgraniterapids
-mprefer-vector-width=512 -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 -xgraniterapids
-mprefer-vector-width=512 -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 -xgraniterapids
-mprefer-vector-width=512 -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

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 -fiopenmp -DSPEC_OPENMP
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

## Peak Compiler Invocation

C benchmarks:
icx

**(Continued on next page)**

## Peak Compiler Invocation (Continued)

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

857.namd_s: basepeak = yes

867.nest_s: basepeak = yes

872.marian_s: basepeak = yes

Fortran benchmarks:

800.pot3d_s: basepeak = yes

**(Continued on next page)**

# Peak Optimization Flags (Continued)

820.cloverleaf_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`

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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