# SPEC CPU®2026 Integer Speed Result

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## Dell Inc.

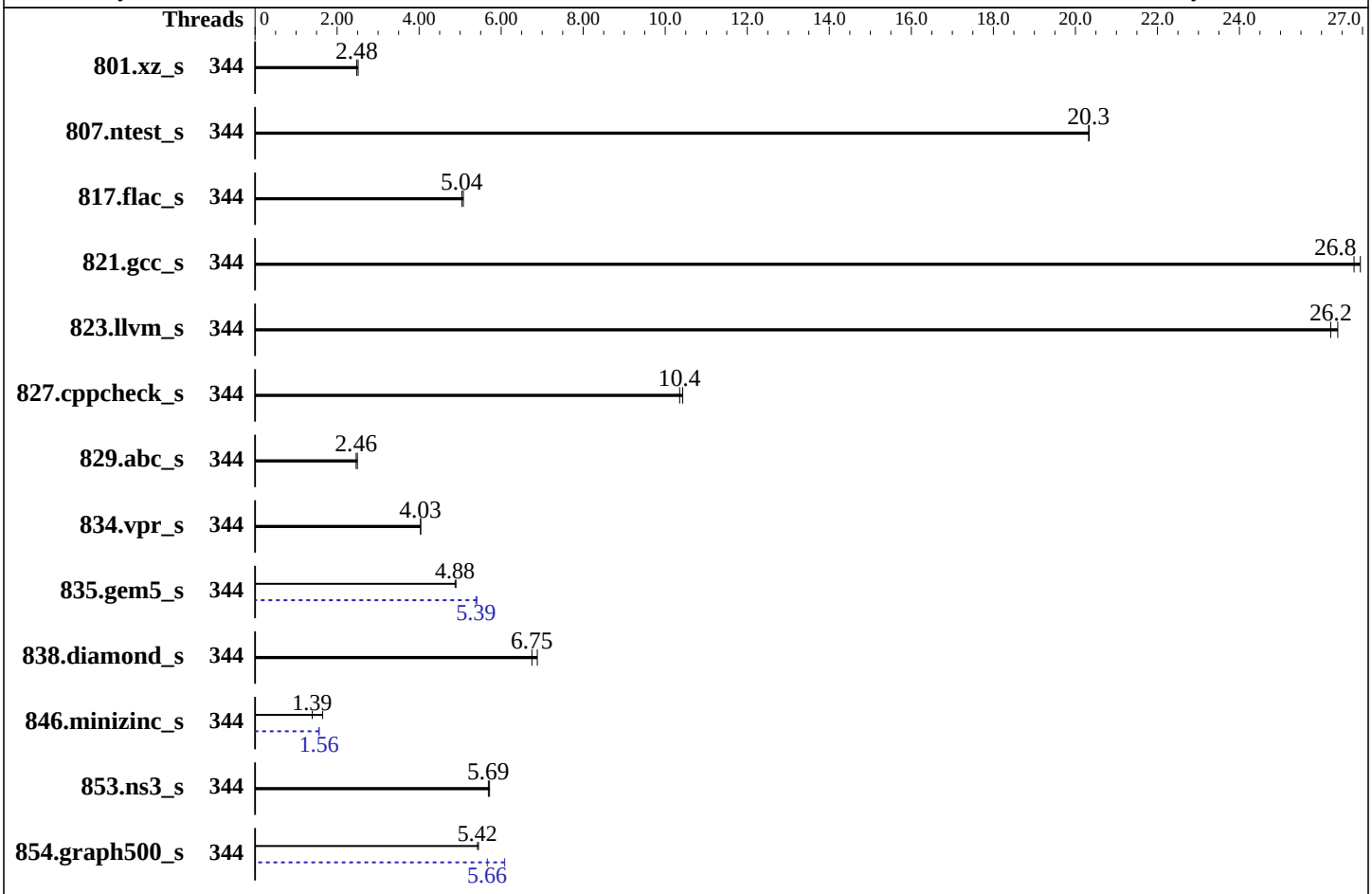
## PowerEdge R770 (Intel Xeon 6787P)

SPECspeed®2026_int_base = 6.33

SPECspeed®2026_int_peak = 6.45

**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, 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: | 336 MB I+D on chip per chip |
| Other: | None |
| Memory: | 1 TB (16 x 64 GB 2Rx4 PC5-6400B-R) |
| Storage: | 190 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 |
| 801.xz_s | 344 | **239** | **2.48** | 235 | 2.51 | | | 344 | **239** | **2.48** | 235 | 2.51 | | |
| 807.ntest_s | 344 | **56.1** | **20.3** | 56.1 | 20.3 | | | 344 | **56.1** | **20.3** | 56.1 | 20.3 | | |
| 817.flac_s | 344 | **345** | **5.04** | 342 | 5.08 | | | 344 | **345** | **5.04** | 342 | 5.08 | | |
| 821.gcc_s | 344 | **77.3** | **26.8** | 76.8 | 26.9 | | | 344 | **77.3** | **26.8** | 76.8 | 26.9 | | |
| 823.llvm_s | 344 | **53.8** | **26.2** | 53.5 | 26.4 | | | 344 | **53.8** | **26.2** | 53.5 | 26.4 | | |
| 827.cppcheck_s | 344 | **108** | **10.4** | 107 | 10.4 | | | 344 | **108** | **10.4** | 107 | 10.4 | | |
| 829.abc_s | 344 | 333 | 2.49 | **337** | **2.46** | | | 344 | 333 | 2.49 | **337** | **2.46** | | |
| 834.vpr_s | 344 | **237** | **4.03** | 236 | 4.04 | | | 344 | **237** | **4.03** | 236 | 4.04 | | |
| 835.gem5_s | 344 | 233 | 4.90 | **234** | **4.88** | | | 344 | 211 | 5.41 | **211** | **5.39** | | |
| 838.diamond_s | 344 | **148** | **6.75** | 145 | 6.88 | | | 344 | **148** | **6.75** | 145 | 6.88 | | |
| 846.minizinc_s | 344 | **481** | **1.39** | 407 | 1.65 | | | 344 | **430** | **1.56** | 429 | 1.56 | | |
| 853.ns3_s | 344 | 202 | 5.72 | **203** | **5.69** | | | 344 | 202 | 5.72 | **203** | **5.69** | | |
| 854.graph500_s | 344 | 112 | 5.45 | **113** | **5.42** | | | 344 | 100 | 6.09 | **108** | **5.66** | | |

**SPECspeed®2026_int_base = 6.33**

**SPECspeed®2026_int_peak = 6.45**

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 190 GB ramdisk created with the cmd: "mount -t tmpfs -o size=190G tmpfs /mnt/ramdisk"
```

## Platform Notes

```
BIOS Settings:
          Sub NUMA Cluster : Enabled

            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 W409208-R770 Thu Feb  5 09:29:11 2026

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

------------------------------------------------------------
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------------------------------------------------------------
 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. sysctl
15. /sys/kernel/mm/transparent_hugepage
16. /sys/kernel/mm/transparent_hugepage/khugepaged
17. OS release
18. Disk information
19. /sys/devices/virtual/dmi/id
20. dmidecode
21. BIOS
------------------------------------------------------------

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

**(Continued on next page)**

## 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
   09:29:11 up 9 min,  1 user,  load average: 0.20, 0.21, 0.16
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
  root     tty1     -                09:21   31.00s  1.11s  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) 4124429
  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) 4124429
  virtual memory          (kbytes, -v) unlimited
  file locks                      (-x) unlimited

------------------------------------------------------------
5. sysinfo process ancestry
 /usr/lib/systemd/systemd --switched-root --system --deserialize=31
 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 344 --define cores=172 --tune base,peak
   -o all --define intspeedaffinity --define smt-on --define drop_caches --iterations 2 --define
```

**(Continued on next page)**

## Platform Notes (Continued)

```
    DL-VERS=7.0_T01 --output_format html,pdf,txt intspeed
  runcpu --nobuild --reportable --action validate --define default-platform-flags --configfile
    ic2025.3-graniterapids-cpu2026-0.902-speed-20260121.cfg --threads 344 --define cores=172 --tune base,peak
    --output_format all --define intspeedaffinity --define smt-on --define drop_caches --iterations 2 --define
    DL-VERS=7.0_T01 --output_format html,pdf,txt --nopower --runmode speed --tune base:peak --size refspeed
    intspeed --nopreenv --note-preenv --logfile $SPEC/tmp/CPU2026.001/templogs/preenv.intspeed.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) 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        : 172
     2 physical ids (chips)
     344 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 0-85,128-213
     physical id 1: apicids 256-341,384-469
  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):                               344
  On-line CPU(s) list:                  0-343
  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
```

**(Continued on next page)**

## Platform Notes (Continued)

```
  Thread(s) per core:                  2
  Core(s) per socket:                  86
  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 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 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 ida
                                       arat pln pts vnmi avx512vbmi umip pku ospke waitpkg avx512_vbmi2 gfni
                                       vaes vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57
                                       rdpid bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm md_clear
                                       serialize tsxldtrk pconfig arch_lbr ibt amx_bf16 avx512_fp16 amx_tile
                                       amx_int8 flush_l1d arch_capabilities
  Virtualization:                      VT-x
  L1d cache:                           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):                   0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48
                                       ,50,52,54,56,58,60,62,64,66,68,70,72,74,76,78,80,82,84,172,174,176,17
                                       8,180,182,184,186,188,190,192,194,196,198,200,202,204,206,208,210,212
                                       ,214,216,218,220,222,224,226,228,230,232,234,236,238,240,242,244,246,
                                       248,250,252,254,256
  NUMA node1 CPU(s):                   86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,118,120,122,
                                       124,126,128,130,132,134,136,138,140,142,144,146,148,150,152,154,156,1
                                       58,160,162,164,166,168,170,258,260,262,264,266,268,270,272,274,276,27
                                       8,280,282,284,286,288,290,292,294,296,298,300,302,304,306,308,310,312
                                       ,314,316,318,320,322,324,326,328,330,332,334,336,338,340,342
  NUMA node2 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
                                       ,51,53,55,57,59,61,63,65,67,69,71,73,75,77,79,81,83,85,173,175,177,17
                                       9,181,183,185,187,189,191,193,195,197,199,201,203,205,207,209,211,213
                                       ,215,217,219,221,223,225,227,229,231,233,235,237,239,241,243,245,247,
                                       249,251,253,255,257
  NUMA node3 CPU(s):                   87,89,91,93,95,97,99,101,103,105,107,109,111,113,115,117,119,121,123,
                                       125,127,129,131,133,135,137,139,141,143,145,147,149,151,153,155,157,1
```

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## Platform Notes (Continued)

```
                                59,161,163,165,167,169,171,259,261,263,265,267,269,271,273,275,277,27
                                9,281,283,285,287,289,291,293,295,297,299,301,303,305,307,309,311,313
                                   ,315,317,319,321,323,325,327,329,331,333,335,337,339,341,343
  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

------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 4 nodes (0-3)
  node 0 cpus:
  0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62,64,66,68,70,72,7
  4,76,78,80,82,84,172,174,176,178,180,182,184,186,188,190,192,194,196,198,200,202,204,206,208,210,212,214,21
  6,218,220,222,224,226,228,230,232,234,236,238,240,242,244,246,248,250,252,254,256
  node 0 size: 257495 MB
  node 0 free: 256149 MB
  node 1 cpus:
  86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,14
  2,144,146,148,150,152,154,156,158,160,162,164,166,168,170,258,260,262,264,266,268,270,272,274,276,278,280,2
  82,284,286,288,290,292,294,296,298,300,302,304,306,308,310,312,314,316,318,320,322,324,326,328,330,332,334,
  336,338,340,342
  node 1 size: 258025 MB
  node 1 free: 257332 MB
  node 2 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
  5,77,79,81,83,85,173,175,177,179,181,183,185,187,189,191,193,195,197,199,201,203,205,207,209,211,213,215,21
  7,219,221,223,225,227,229,231,233,235,237,239,241,243,245,247,249,251,253,255,257
```

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## Platform Notes (Continued)

```
   node 2 size: 258025 MB
   node 2 free: 243837 MB
   node 3 cpus:
  87,89,91,93,95,97,99,101,103,105,107,109,111,113,115,117,119,121,123,125,127,129,131,133,135,137,139,141,14
  3,145,147,149,151,153,155,157,159,161,163,165,167,169,171,259,261,263,265,267,269,271,273,275,277,279,281,2
  83,285,287,289,291,293,295,297,299,301,303,305,307,309,311,313,315,317,319,321,323,325,327,329,331,333,335,
   337,339,341,343
   node 3 size: 257585 MB
   node 3 free: 243244 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:       1055880092 kB

------------------------------------------------------------
10. who -r
  run-level 3 Feb 5 09:20

------------------------------------------------------------
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          apparmor auditd cron firewalld getty@ irqbalance issue-generator kbdsettings kdump
                  kdump-early kdump-notify nvmefc-boot-connections nvmf-autoconnect postfix purge-kernels
                    rollback sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6
                      wickedd-nanny
  enabled-runtime  systemd-remount-fs
  disabled         boot-sysctl ca-certificates chrony-wait chronyd console-getty debug-shell ebtables fsidd
                    grub2-once haveged issue-add-ssh-keys kexec-load lunmask nfs nfs-blkmap rpcbind
                   rpmconfigcheck rsyncd serial-getty@ systemd-boot-check-no-failures systemd-confext
                   systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd
  indirect            systemd-userdbd wickedd

------------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
  root=UUID=9f371995-0f0f-4242-a0da-7946c498436b
```

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## Platform Notes (Continued)

```
   splash=silent
   resume=/dev/disk/by-uuid/6f9986a8-df9a-4d59-9d87-5688414dc3e7
   mitigations=auto
   quiet
   security=apparmor
   crashkernel=323M,high
   crashkernel=72M,low

------------------------------------------------------------
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+madvise [madvise] never
   enabled         [always] madvise 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 15 SP6

 ------------------------------------------------------------
 18. Disk information
 SPEC is set to: /mnt/ramdisk/cpu2026-RC2
   Filesystem     Type   Size  Used Avail Use% Mounted on
   tmpfs          tmpfs  190G   13G  178G   7% /mnt/ramdisk

 ------------------------------------------------------------
 19. /sys/devices/virtual/dmi/id
     Vendor:         Dell Inc.
     Product:        PowerEdge R770
     Product Family: PowerEdge
     Serial:         W409208

 ------------------------------------------------------------
 20. 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:
      14x 002C069D002C MTC40F2046S1RC64BD1 USFF 64 GB 2 rank 6400
      2x 002C069D002C MTC40F2046S1RC64BD2 QSFF 64 GB 2 rank 6400


 ------------------------------------------------------------
 21. 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      | 854.graph500_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)**

## Compiler Version Notes (Continued)

```
==============================================================================
C++    | 807.ntest_s(base, peak) 827.cppcheck_s(base, peak) 853.ns3_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 | 801.xz_s(base, peak) 817.flac_s(base, peak) 821.gcc_s(base, peak)
       | 823.llvm_s(base, peak) 829.abc_s(base, peak) 834.vpr_s(base, peak)
       | 835.gem5_s(base, peak) 838.diamond_s(base, peak)
       | 846.minizinc_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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------------------------------------------------------------------------------
```

## Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Benchmarks using both C and C++:
icpx icx

## Base Portability Flags

801.xz_s: -DSPEC_LP64
807.ntest_s: -DSPEC_LP64
817.flac_s: -DSPEC_LP64
821.gcc_s: -DSPEC_LP64
823.llvm_s: -DSPEC_LP64
827.cppcheck_s: -DSPEC_LP64
829.abc_s: -DSPEC_LP64
834.vpr_s: -DSPEC_LP64
835.gem5_s: -DSPEC_LP64

**(Continued on next page)**

## Base Portability Flags (Continued)

838.diamond_s: -DSPEC_LP64
846.minizinc_s: -DSPEC_LP64
853.ns3_s: -DSPEC_LP64
854.graph500_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:

807.ntest_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

827.cppcheck_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

853.ns3_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
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

Benchmarks using both C and C++:

801.xz_s: -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
-pthread -L/usr/local/jemalloc-5.3.0/lib -ljemalloc

817.flac_s: Same as 801.xz_s

821.gcc_s: -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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## Base Optimization Flags (Continued)

823.llvm_s: Same as 801.xz_s

829.abc_s: Same as 821.gcc_s

834.vpr_s: Same as 821.gcc_s

835.gem5_s: Same as 801.xz_s

838.diamond_s: Same as 801.xz_s

846.minizinc_s: Same as 801.xz_s

## Peak Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Benchmarks using both C and C++:
icpx icx

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:
-m64 -std=c18 -Wl,-z,muldefs -fiopenmp -DSPEC_OPENMP
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

C++ benchmarks:

807.ntest_s: basepeak = yes

**(Continued on next page)**

# Peak Optimization Flags (Continued)

827.cppcheck_s: basepeak = yes

853.ns3_s: basepeak = yes

Benchmarks using both C and C++:

801.xz_s: basepeak = yes

817.flac_s: basepeak = yes

821.gcc_s: basepeak = yes

823.llvm_s: basepeak = yes

829.abc_s: basepeak = yes

834.vpr_s: basepeak = yes

835.gem5_s: -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 -pthread
-L/usr/local/jemalloc-5.3.0/lib -ljemalloc

838.diamond_s: basepeak = yes

846.minizinc_s: Same as 835.gem5_s

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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For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

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