



# SPEC CPU®2026 Integer Speed Result

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## Dell Inc.

SPECspeed®2026\_int\_base = 7.09

## PowerEdge R770AP (Intel Xeon 6978P)

SPECspeed®2026\_int\_peak = Not Run

CPU2026 License: 6573

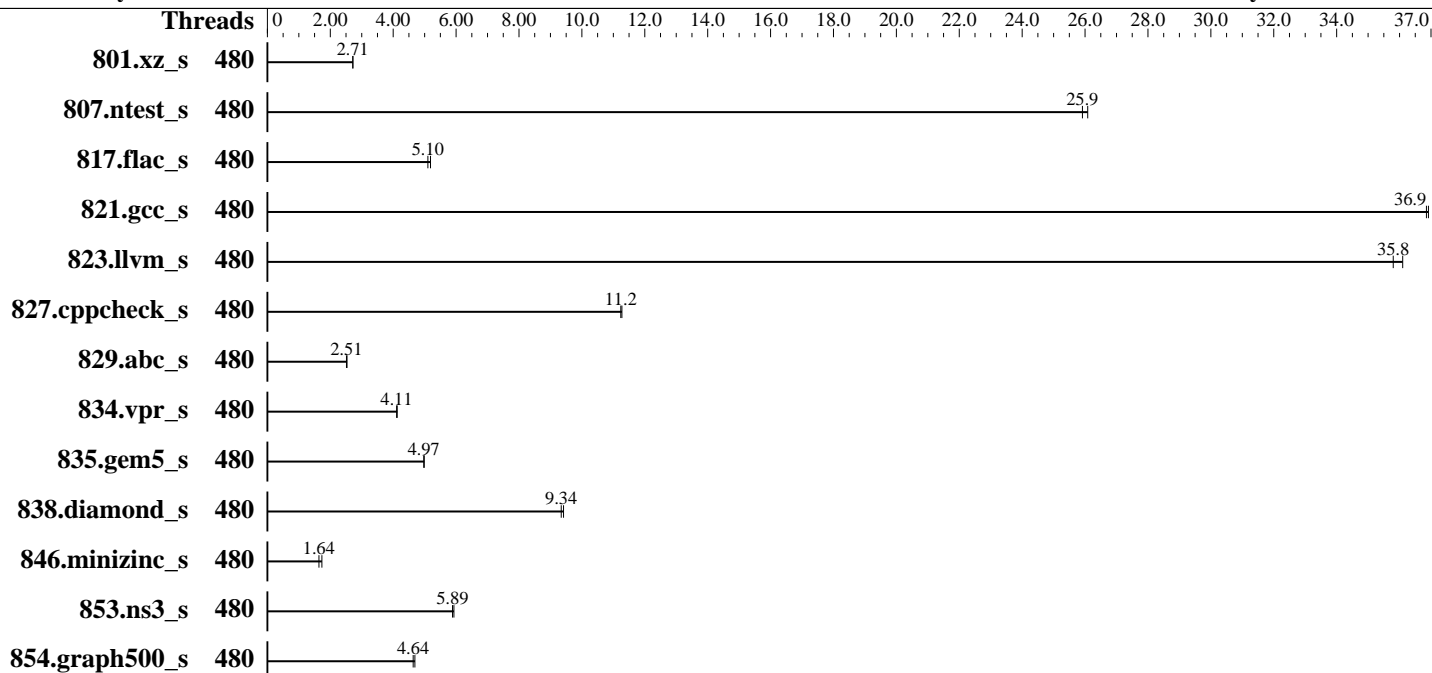
Test Date: Feb-2026

Test Sponsor: Dell Inc.

Hardware Availability: Dec-2025

Tested by: Dell Inc.

Software Availability: Nov-2025



### Hardware

CPU Name: Intel Xeon 6978P  
 Max MHz: 3900  
 Nominal: 2100  
 Enabled: 240 cores, 2 chips, 2 threads/core  
 Orderable: 1,2 chips  
 Cache L1: 64 KB I + 48 KB D on chip per core  
 L2: 2 MB I+D on chip per core  
 L3: 504 MB I+D on chip per chip  
 Other: None  
 Memory: 1536 GB (24 x 64 GB 2Rx4 PC5-6400B-R)  
 Storage: 240 GB on tmpfs  
 Cooling: Air  
 Other: None

### Software

OS: SUSE Linux Enterprise Server 16.0  
 6.12.0-160000.5-default  
 Compiler: C/C++: Version 2025.3 of Intel oneAPI DPC++/C++  
 Compiler for Linux;  
 Fortran: Version 2025.3 of Intel Fortran  
 Compiler for Linux  
 Compiler Category: Vendor  
 Firmware: Version 1.1.6 released Nov-2025  
 File System: tmpfs  
 System State: Run level 5 (graphical multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: Not Applicable  
 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	480	<b>218</b>	<b>2.71</b>	217	2.72									
807.ntest_s	480	43.7	26.1	<b>44.0</b>	<b>25.9</b>									
817.flac_s	480	<b>340</b>	<b>5.10</b>	335	5.19									
821.gcc_s	480	<b>56.2</b>	<b>36.9</b>	56.1	36.9									
823.llvm_s	480	39.1	36.1	<b>39.4</b>	<b>35.8</b>									
827.cppcheck_s	480	<b>99.6</b>	<b>11.2</b>	99.3	11.3									
829.abc_s	480	328	2.53	<b>330</b>	<b>2.51</b>									
834.vpr_s	480	231	4.13	<b>232</b>	<b>4.11</b>									
835.gem5_s	480	228	4.99	<b>229</b>	<b>4.97</b>									
838.diamond_s	480	<b>107</b>	<b>9.34</b>	106	9.42									
846.minizinc_s	480	<b>409</b>	<b>1.64</b>	387	1.73									
853.ns3_s	480	194	5.93	<b>196</b>	<b>5.89</b>									
854.graph500_s	480	130	4.69	<b>132</b>	<b>4.64</b>									

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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/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 240 GB ramdisk created with the cmd: "mount -t tmpfs -o size=240G tmpfs /mnt/ramdisk"



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## 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/cpu2026rc2/bin/sysinfo

Rev: 069f95da7e7f5d81b2ce48a82150e54f

running on R7701AP-R770AP Fri Feb 6 02:36:29 2026

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

### Table of contents

1. uname -srvm
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numactl --hardware
9. /proc/meminfo
10. Systemd service manager version: systemd 257 (257.7+suse.19.ga0dfd5de4c)
11. Services, from systemctl list-unit-files
12. Linux kernel boot-time arguments, from /proc/cmdline
13. cpupower frequency-info
14. sysctl
15. /sys/kernel/mm/transparent\_hugepage
16. /sys/kernel/mm/transparent\_hugepage/khugepaged
17. OS release
18. Disk information
19. /sys/devices/virtual/dmi/id
20. dmidecode
21. BIOS

1. uname -srvm

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## Platform Notes (Continued)

Linux 6.12.0-160000.5-default #1 SMP PREEMPT\_DYNAMIC Wed Sep 10 15:26:25 UTC 2025 (3545bbd) x86\_64

```

-----
2. w
   02:36:29 up 5 min,  1 user,  load average: 0.91, 4.02, 2.44
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
root      tty1     -             02:31   37.00s  1.16s  ?     /bin/bash
/home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=7.0_T01 --output_format html,pdf,txt
--tune base

```

```

-----
3. Username
   From environment variable $USER:  root

```

```

-----
4. ulimit -a
real-time non-blocking time (microseconds, -R) unlimited
core file size              (blocks, -c) unlimited
data seg size                (kbytes, -d) unlimited
scheduling priority         (-e) 0
file size                    (blocks, -f) unlimited
pending signals              (-i) 6189318
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) 6189318
virtual memory                (kbytes, -v) unlimited
file locks                    (-x) unlimited

```

```

-----
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize=47
login -- root
-bash
/bin/bash /home/DellFiles/bin/DELL_speed.sh --tune base
/bin/bash /home/DellFiles/bin/dell-run-main.sh speed --tune base
/bin/bash /home/DellFiles/bin/dell-run-main.sh speed --tune base
/bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=7.0_T01 --output_format
html,pdf,txt --tune base
/bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=7.0_T01 --output_format
html,pdf,txt --tune base
runcpu --nobuild --reportable --action validate --define default-platform-flags -c

```

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## Platform Notes (Continued)

```
ic2025.3-graniterapids-cpu2026-0.902-speed-20260121.cfg --threads 480 --define cores=240 --tune base,peak
-o all --define intsppedaffinity --define smt-on --define drop_caches --iterations 2 --define base_only
--define DL-VERS=7.0_T01 --output_format html,pdf,txt --tune base intspped
runcpu --nobuild --reportable --action validate --define default-platform-flags --configfile
ic2025.3-graniterapids-cpu2026-0.902-speed-20260121.cfg --threads 480 --define cores=240 --tune base,peak
--output_format all --define intsppedaffinity --define smt-on --define drop_caches --iterations 2 --define
base_only --define DL-VERS=7.0_T01 --output_format html,pdf,txt --tune base --nopower --runmode speed
--tune base --size refspped intspped --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2026.001/templogs/preenv.intspped.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2026rc2
```

```
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6978P
vendor_id      : GenuineIntel
cpu family     : 6
model          : 173
stepping       : 1
microcode      : 0x10003f3
bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi spectre_v2_user
cpu cores     : 120
siblings       : 240
2 physical ids (chips)
480 processors (hardware threads)
physical id 0: core ids 0-39,64-103,128-167
physical id 1: core ids 0-39,64-103,128-167
physical id 0: apicids 0-79,128-207,256-335
physical id 1: apicids 512-591,640-719,768-847
```

Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for virtualized systems. Use the above data carefully.

### 7. lscpu

```
From lscpu from util-linux 2.41.1:
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:         52 bits physical, 57 bits virtual
Byte Order:            Little Endian
CPU(s):                480
On-line CPU(s) list:   0-479
Vendor ID:             GenuineIntel
Model name:            Intel(R) Xeon(R) 6978P
CPU family:            6
Model:                 173
Thread(s) per core:    2
```

(Continued on next page)



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### Platform Notes (Continued)

```

Core(s) per socket:          120
Socket(s):                  2
Stepping:                   1
BogoMIPS:                   4200.00
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 bmil avx2 smep
                             bmi2 erms invpcid cqm rdt_a avx512f avx512dq rdseed adx smap
                             avx512ifma clflushopt clwb intel_pt avx512cd sha_ni avx512bw
                             avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc
                             cqm_mbm_total cqm_mbm_local split_lock_detect user_shstk avx_vnni
                             avx512_bf16 wbnoinvd dtherm ida arat pln pts hfi vnmi avx512vbmi
                             umip pku ospke waitpkg avx512_vbmi2 gfni vaes vpclmulqdq
                             avx512_vnni avx512_bitalg avx512_vpopcntdq la57 rdpid
                             bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm md_clear
                             serialize tsxldtrk pconfig arch_lbr ibt amx_bf16 avx512_fp16
                             amx_tile amx_int8 flush_lld arch_capabilities

Virtualization:              VT-x
L1d cache:                   11.3 MiB (240 instances)
L1i cache:                   15 MiB (240 instances)
L2 cache:                    480 MiB (240 instances)
L3 cache:                    1008 MiB (2 instances)
NUMA node(s):                6
NUMA node0 CPU(s):          0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46
                             ,48,50,52,54,56,58,60,62,64,66,68,70,72,74,76,78,240,242,244,246,2
                             48,250,252,254,256,258,260,262,264,266,268,270,272,274,276,278,280
                             ,282,284,286,288,290,292,294,296,298,300,302,304,306,308,310,312,3
                             14,316,318
NUMA node1 CPU(s):          80,82,84,86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,
                             118,120,122,124,126,128,130,132,134,136,138,140,142,144,146,148,15
                             0,152,154,156,158,320,322,324,326,328,330,332,334,336,338,340,342,
                             344,346,348,350,352,354,356,358,360,362,364,366,368,370,372,374,37
                             6,378,380,382,384,386,388,390,392,394,396,398
NUMA node2 CPU(s):          160,162,164,166,168,170,172,174,176,178,180,182,184,186,188,190,19
                             2,194,196,198,200,202,204,206,208,210,212,214,216,218,220,222,224,
                             226,228,230,232,234,236,238,400,402,404,406,408,410,412,414,416,41
                             8,420,422,424,426,428,430,432,434,436,438,440,442,444,446,448,450,
                             452,454,456,458,460,462,464,466,468,470,472,474,476,478
NUMA node3 CPU(s):          1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47
                             ,49,51,53,55,57,59,61,63,65,67,69,71,73,75,77,79,241,243,245,247,2

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## Platform Notes (Continued)

```

49, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277, 279, 281
, 283, 285, 287, 289, 291, 293, 295, 297, 299, 301, 303, 305, 307, 309, 311, 313, 3
15, 317, 319

NUMA node4 CPU(s): 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, 135, 137, 139, 141, 143, 145, 147, 149, 15
1, 153, 155, 157, 159, 321, 323, 325, 327, 329, 331, 333, 335, 337, 339, 341, 343,
345, 347, 349, 351, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 37
7, 379, 381, 383, 385, 387, 389, 391, 393, 395, 397, 399

NUMA node5 CPU(s): 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 181, 183, 185, 187, 189, 191, 19
3, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213, 215, 217, 219, 221, 223, 225,
227, 229, 231, 233, 235, 237, 239, 401, 403, 405, 407, 409, 411, 413, 415, 417, 41
9, 421, 423, 425, 427, 429, 431, 433, 435, 437, 439, 441, 443, 445, 447, 449, 451,
453, 455, 457, 459, 461, 463, 465, 467, 469, 471, 473, 475, 477, 479

Vulnerability Gather data sampling: Not affected
Vulnerability Indirect target selection: Not affected
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf: Not affected
Vulnerability Mds: Not affected
Vulnerability Meltdown: Not affected
Vulnerability Mmio stale data: Not affected
Vulnerability Reg file data sampling: Not affected
Vulnerability Retbleed: Not affected
Vulnerability Spec rstack overflow: Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl
Vulnerability Spectre v1: Mitigation; usercopy/swaps barriers and __user pointer
sanitization
Vulnerability Spectre v2: Mitigation; Enhanced / Automatic IBRS; IBPB conditional;
PBR SB-eIBRS Not affected; BHI BHI_DIS_S

Vulnerability Srbds: Not affected
Vulnerability Tsa: Not affected
Vulnerability Tsx async abort: Not affected

```

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	11.3M	12	Data	1	64	1	64
L1i	64K	15M	16	Instruction	1	64	1	64
L2	2M	480M	16	Unified	2	2048	1	64
L3	504M	1008M	16	Unified	3	516096	1	64

8. numactl --hardware

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

available: 6 nodes (0-5)

node 0 cpus:

```

0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 7
4, 76, 78, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288
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```

node 0 size: 257586 MB
node 0 free: 256680 MB
node 1 cpus:
80,82,84,86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,1
38,140,142,144,146,148,150,152,154,156,158,320,322,324,326,328,330,332,334,336,338,340,342,344,346,348,350,
352,354,356,358,360,362,364,366,368,370,372,374,376,378,380,382,384,386,388,390,392,394,396,398
node 1 size: 258018 MB
node 1 free: 228824 MB
node 2 cpus:
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
,214,216,218,220,222,224,226,228,230,232,234,236,238,400,402,404,406,408,410,412,414,416,418,420,422,424,42
6,428,430,432,434,436,438,440,442,444,446,448,450,452,454,456,458,460,462,464,466,468,470,472,474,476,478
node 2 size: 257977 MB
node 2 free: 257228 MB
node 3 cpus:
1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49,51,53,55,57,59,61,63,65,67,69,71,73,7
5,77,79,241,243,245,247,249,251,253,255,257,259,261,263,265,267,269,271,273,275,277,279,281,283,285,287,289
,291,293,295,297,299,301,303,305,307,309,311,313,315,317,319
node 3 size: 258018 MB
node 3 free: 257160 MB
node 4 cpus:
81,83,85,87,89,91,93,95,97,99,101,103,105,107,109,111,113,115,117,119,121,123,125,127,129,131,133,135,137,1
39,141,143,145,147,149,151,153,155,157,159,321,323,325,327,329,331,333,335,337,339,341,343,345,347,349,351,
353,355,357,359,361,363,365,367,369,371,373,375,377,379,381,383,385,387,389,391,393,395,397,399
node 4 size: 258018 MB
node 4 free: 257025 MB
node 5 cpus:
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
,215,217,219,221,223,225,227,229,231,233,235,237,239,401,403,405,407,409,411,413,415,417,419,421,423,425,42
7,429,431,433,435,437,439,441,443,445,447,449,451,453,455,457,459,461,463,465,467,469,471,473,475,477,479
node 5 size: 257939 MB
node 5 free: 256871 MB
node distances:
node      0      1      2      3      4      5
0:      10      15      17      29      29      29
1:      15      10      15      29      29      29
2:      17      15      10      29      29      29
3:      29      29      29      10      15      17
4:      29      29      29      15      10      15
5:      29      29      29      17      15      10

```

```

-----
9. /proc/meminfo
   MemTotal:      1584700848 kB

'who -r' did not return a run level

```

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Software Availability: Nov-2025

## Platform Notes (Continued)

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

11. Services, from systemctl list-unit-files

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

12. Linux kernel boot-time arguments, from /proc/cmdline  
BOOT\_IMAGE=/boot/vmlinuz-6.12.0-160000.5-default  
root=UUID=187f5822-5433-42e1-bee8-2e104457c7c5  
mitigations=auto  
quiet  
security=selinux  
selinux=1

13. cpupower frequency-info  
analyzing CPU 423:  
Unable to determine current policy  
boost state support:  
Supported: yes  
Active: yes

14. sysctl

kernel.numa_balancing	1
kernel.randomize_va_space	2
vm.compaction_proactiveness	20
vm.dirty_background_bytes	0
vm.dirty_background_ratio	10

(Continued on next page)



# SPEC CPU®2026 Integer Speed Result

Copyright 2026 Standard Performance Evaluation Corporation

Dell Inc.

SPECspeed®2026\_int\_base = 7.09

PowerEdge R770AP (Intel Xeon 6978P)

SPECspeed®2026\_int\_peak = Not Run

CPU2026 License: 6573

Test Date: Feb-2026

Test Sponsor: Dell Inc.

Hardware Availability: Dec-2025

Tested by: Dell Inc.

Software Availability: Nov-2025

## Platform Notes (Continued)

```

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

```

```

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

```

```

-----
18. Disk information
SPEC is set to: /mnt/ramdisk/cpu2026rc2
Filesystem Type Size Used Avail Use% Mounted on
tmpfs tmpfs 240G 13G 228G 6% /mnt/ramdisk

```

```

-----
19. /sys/devices/virtual/dmi/id
Vendor: Dell Inc.
Product: PowerEdge R770AP

```

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## Platform Notes (Continued)

Product Family: PowerEdge  
Serial: R7701AP

### 20. dmidecode

Additional information from dmidecode 3.6 follows. WARNING: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

#### Memory:

13x 00CE063200CE M321R8GA0PB1-CCPQC 64 GB 2 rank 6400  
11x 00CE063200CE M321R8GA0PB2-CCPKC 64 GB 2 rank 6400

### 21. BIOS

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

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

## Compiler Version Notes

C | 854.graph500\_s(base)

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++ | 807.ntest\_s(base) 827.cppcheck\_s(base) 853.ns3\_s(base)

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 | 801.xz\_s(base) 817.flac\_s(base) 821.gcc\_s(base) 823.llvm\_s(base)  
| 829.abc\_s(base) 834.vpr\_s(base) 835.gem5\_s(base) 838.diamond\_s(base)  
| 846.minizinc\_s(base)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,

(Continued on next page)



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CPU2026 License: 6573

Test Date: Feb-2026

Test Sponsor: Dell Inc.

Hardware Availability: Dec-2025

Tested by: Dell Inc.

Software Availability: Nov-2025

## Compiler Version Notes (Continued)

Version 2025.3.0 Build 20251010  
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.

## 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  
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:

(Continued on next page)



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## Base Optimization Flags (Continued)

```
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
```

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

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>



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**CPU2026 License:** 6573

**Test Date:** Feb-2026

**Test Sponsor:** Dell Inc.

**Hardware Availability:** Dec-2025

**Tested by:** Dell Inc.

**Software Availability:** Nov-2025

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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