SPEC CPU®2017 Integer Speed Result

Dell Inc.

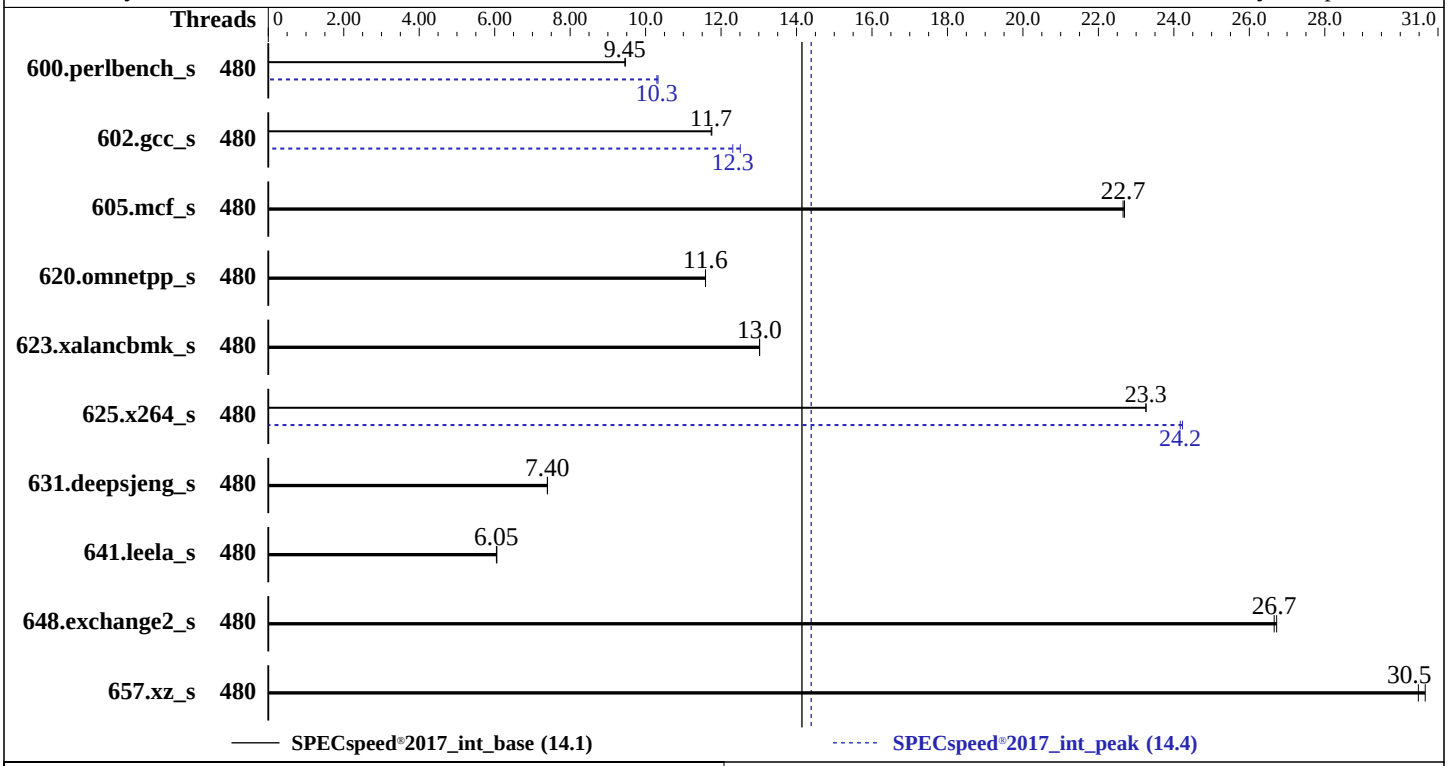
PowerEdge R770AP (Intel Xeon 6978P)

SPECspeed®2017_int_base = 14.1

SPECspeed®2017_int_peak = 14.4

CPU2017 License: 6573
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

Test Date: Nov-2025
Hardware Availability: Nov-2025
Software Availability: Sep-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:	350 GB on tmpfs
Other:	CPU Cooling: Air

Software

OS:	SUSE Linux Enterprise Server 16.0 6.12.0-160000.4-default
Compiler:	C/C++: Version 2025.2 of Intel oneAPI DPC++/C++ Compiler for Linux; Fortran: Version 2025.2 of Intel Fortran Compiler for Linux;
Parallel:	Yes
Firmware:	Version 1.1.5 released Oct-2025
File System:	tmpfs
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	jemalloc memory allocator V5.0.1
Power Management:	BIOS set to prefer performance at the cost of additional power usage.

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	480	188	9.46	**188**	**9.45**			480	172	10.3	**172**	**10.3**		
602.gcc_s	480	339	11.8	**339**	**11.7**			480	318	12.5	**323**	**12.3**		
605.mcf_s	480	208	22.7	**208**	**22.7**			480	208	22.7	**208**	**22.7**		
620.omnetpp_s	480	141	11.6	**141**	**11.6**			480	141	11.6	**141**	**11.6**		
623.xalancbmk_s	480	**109**	**13.0**	109	13.0			480	**109**	**13.0**	109	13.0		
625.x264_s	480	**75.8**	**23.3**	75.8	23.3			480	72.8	24.2	**73.0**	**24.2**		
631.deepsjeng_s	480	194	7.40	**194**	**7.40**			480	194	7.40	**194**	**7.40**		
641.leela_s	480	282	6.06	**282**	**6.05**			480	282	6.06	**282**	**6.05**		
648.exchange2_s	480	**110**	**26.7**	110	26.7			480	**110**	**26.7**	110	26.7		
657.xz_s	480	**203**	**30.5**	202	30.7			480	**203**	**30.5**	202	30.7		

SPECspeed®2017_int_base = 14.1

SPECspeed®2017_int_peak = 14.4

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:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH =
     "/mnt/ramdisk/cpu2017-1.1.9-ic2025.2/lib/intel64:/mnt/ramdisk/cpu2017-1.1.9-ic2025.2/je5.0.1-64"
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 Redhat Enterprise Linux 8.0
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 RedHat Enterprise 7.5, and the system compiler gcc 4.8.5
sources available from jemalloc.net or https://github.com/jemalloc/jemalloc/releases

Benchmark run from a 350 GB ramdisk created with the cmd: "mount -t tmpfs -o size=350G tmpfs /mnt/ramdisk"
```

Platform Notes

```
BIOS Settings:
          Sub NUMA Cluster : Enabled
```

(Continued on next page)

Platform Notes (Continued)

```
           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/cpu2017-1.1.9-ic2025.2/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on S123456-R770AP Fri Nov 14 16:57:13 2025

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

------------------------------------------------------------
Table of contents
------------------------------------------------------------
 1. uname -a
 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 -a
  Linux S123456-R770AP 6.12.0-160000.4-default #1 SMP PREEMPT_DYNAMIC Wed Aug 20 16:45:35 UTC 2025 (1147121)
  x86_64 x86_64 x86_64 GNU/Linux

------------------------------------------------------------
2. w
   16:57:13 up 5 min,  1 user,  load average: 0.45, 0.48, 0.28
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU  WHAT
  root     tty1     -                16:52   32.00s  0.91s   ?    /bin/bash
  /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=6.4_T17 --output_format html,pdf,txt

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

------------------------------------------------------------
4. ulimit -a
  real-time non-blocking time  (microseconds, -R) unlimited
```

(Continued on next page)

Platform Notes (Continued)

```
  core file size              (blocks, -c) unlimited
  data seg size               (kbytes, -d) unlimited
  scheduling priority                 (-e) 0
  file size                   (blocks, -f) unlimited
  pending signals                     (-i) 6189319
  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) 6189319
  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 ./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=6.4_T17 --output_format
   html,pdf,txt
 /bin/bash /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=6.4_T17 --output_format
   html,pdf,txt
 runcpu --nobuild --action validate --define default-platform-flags -c
   ic2025.2-linux64-graniterapids-speed-20250605.cfg --define cores=240 --tune base,peak -o all --define
   intspeedaffinity --define smt-on --define drop_caches --iterations 2 --define DL-VERS=6.4_T17
   --output_format html,pdf,txt intspeed
 runcpu --nobuild --action validate --define default-platform-flags --configfile
   ic2025.2-linux64-graniterapids-speed-20250605.cfg --define cores=240 --tune base,peak --output_format all
   --define intspeedaffinity --define smt-on --define drop_caches --iterations 2 --define DL-VERS=6.4_T17
   --output_format html,pdf,txt --nopower --runmode speed --tune base:peak --size refspeed intspeed
   --nopreenv --note-preenv --logfile $SPEC/tmp/CPU2017.001/templogs/preenv.intspeed.001.0.log --lognum 001.0
   --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /mnt/ramdisk/cpu2017-1.1.9-ic2025.2

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

(Continued on next page)

Platform Notes (Continued)

```
  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
  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 bmi1 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_l1d 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
```

(Continued on next page)

Platform Notes (Continued)

```
                                        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
                                        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/swapgs barriers and __user pointer
                                        sanitization
  Vulnerability Spectre v2:             Mitigation; Enhanced / Automatic IBRS; IBPB conditional;
                                        PBRSB-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
  ,290,292,294,296,298,300,302,304,306,308,310,312,314,316,318
  node 0 size: 257545 MB
  node 0 free: 243208 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: 257691 MB
  node 2 cpus:
```

(Continued on next page)

Platform Notes (Continued)

```
  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: 258018 MB
  node 2 free: 257693 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: 257715 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: 257703 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: 257640 MB
  node distances:
  node     0    1    2    3    4    5
     0:   10   15   17   21   28   26
     1:   15   10   15   23   26   23
     2:   17   15   10   26   23   21
     3:   21   28   26   10   15   17
     4:   23   26   23   15   10   15
     5:   26   23   21   17   15   10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       1584700896 kB

'who -r' did not return a run level

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

------------------------------------------------------------
11. Services, from systemctl list-unit-files
  STATE            UNIT FILES
  enabled          NetworkManager NetworkManager-dispatcher NetworkManager-wait-online audit-rules auditd
                   bluetooth chronyd dbus-broker firewalld gdm getty@ irqbalance issue-generator kbdsettings
                   klog lvm2-monitor nvmefc-boot-connections nvmf-autoconnect rollback rsyslog smartd
                   soft-reboot-cleanup sshd systemd-pstore wpa_supplicant wtmpdb-update-boot
  enabled-runtime  systemd-remount-fs
  disabled         accounts-daemon blk-availability bluetooth-mesh boot-sysctl ca-certificates
                   ca-certificates-setup chrony-wait console-getty cups debug-shell dnsmasq
                   gnome-remote-desktop gnome-remote-desktop-configuration 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 pkcs11_eventmgr rpmconfigcheck rsyncd rtkit-daemon serial-getty@
                   setup-systemd-proxy-env smartd_generate_opts snmpd snmptrapd speech-dispatcherd
                   systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-sysext
                   systemd-time-wait-sync systemd-timesyncd systemd-udev-load-credentials udisks2 upower
```

(Continued on next page)

Platform Notes (Continued)

```
                  wpa_supplicant@
  indirect        pcscd systemd-userdbd

------------------------------------------------------------
12. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-6.12.0-160000.4-default
  root=UUID=fc9357ce-cf7a-480b-b934-caccd249a971
  mitigations=auto
  quiet
  security=selinux
  selinux=1

------------------------------------------------------------
13. cpupower frequency-info
  analyzing CPU 0:
    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
  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

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

(Continued on next page)

Platform Notes (Continued)

```
 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/cpu2017-1.1.9-ic2025.2
   Filesystem     Type   Size  Used Avail Use% Mounted on
   tmpfs          tmpfs  350G  5.8G  345G   2% /mnt/ramdisk

 ------------------------------------------------------------
 19. /sys/devices/virtual/dmi/id
     Vendor:         Dell Inc.
     Product:        PowerEdge R770AP
     Product Family: PowerEdge
     Serial:         S123456

 ------------------------------------------------------------
 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:
     22x 00AD042300AD HMCG94AHBRA480N 64 GB 2 rank 6400
     2x 00AD063200AD HMCG94AHBRA283N 64 GB 2 rank 6400


 ------------------------------------------------------------
 21. BIOS
 (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:       Dell Inc.
    BIOS Version:      1.1.5
    BIOS Date:         10/22/2025
    BIOS Revision:     1.1
```

Compiler Version Notes

```
==============================================================================================================
C       | 600.perlbench_s(base, peak) 602.gcc_s(base, peak) 605.mcf_s(base, peak) 625.x264_s(base, peak)
        | 657.xz_s(base, peak)
--------------------------------------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
--------------------------------------------------------------------------------------------------------------

==============================================================================================================
C++     | 620.omnetpp_s(base, peak) 623.xalancbmk_s(base, peak) 631.deepsjeng_s(base, peak)
        | 641.leela_s(base, peak)
--------------------------------------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
--------------------------------------------------------------------------------------------------------------

==============================================================================================================
Fortran | 648.exchange2_s(base, peak)
--------------------------------------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
```

(Continued on next page)

Compiler Version Notes (Continued)

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

Base Portability Flags

600.perlbench_s: -DSPEC_LP64 -DSPEC_LINUX_X64
602.gcc_s: -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.omnetpp_s: -DSPEC_LP64
623.xalancbmk_s: -DSPEC_LP64 -DSPEC_LINUX
625.x264_s: -DSPEC_LP64
631.deepsjeng_s: -DSPEC_LP64
641.leela_s: -DSPEC_LP64
648.exchange2_s: -DSPEC_LP64
657.xz_s: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-w -std=c11 -m64 -Wl,-z,muldefs -xgraniterapids -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

C++ benchmarks:
-w -std=c++14 -m64 -Wl,-z,muldefs -xgraniterapids -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-fdelayed-template-parsing -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Fortran benchmarks:
-w -m64 -Wl,-z,muldefs -xgraniterapids -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte

(Continued on next page)

Base Optimization Flags (Continued)

Fortran benchmarks (continued):
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Peak Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

600.perlbench_s: -w -m64 -std=c11 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast(pass 1) -xCORE-AVX512 -O3 -ffast-math
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-fiopenmp -DSPEC_OPENMP -fno-strict-overflow
-fno-strict-aliasing -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc

602.gcc_s: -w -m64 -std=c11 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast(pass 1) -xCORE-AVX512 -O3 -ffast-math
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-fiopenmp -DSPEC_OPENMP -L/usr/local/jemalloc64-5.0.1/lib
-ljemalloc

(Continued on next page)

Peak Optimization Flags (Continued)

605.mcf_s: basepeak = yes

625.x264_s: -w -std=c11 -m64 -Wl,-z,muldefs -xgraniterapids -O3
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP
-fno-alias -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

657.xz_s: basepeak = yes

C++ benchmarks:

620.omnetpp_s: basepeak = yes

623.xalancbmk_s: basepeak = yes

631.deepsjeng_s: basepeak = yes

641.leela_s: basepeak = yes

Fortran benchmarks:

648.exchange2_s: basepeak = yes

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/Intel-ic2025-official-linux64.html
http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-Intel-Xeon-v1.18.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic2025-official-linux64.xml
http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-Intel-Xeon-v1.18.xml

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

Tested with SPEC CPU®2017 v1.1.9 on 2025-11-14 03:57:12-0500.
Report generated on 2025-12-16 21:35:57 by CPU2017 PDF formatter v6716.
Originally published on 2025-12-16.