SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2025 Standard Performance Evaluation Corporation

Dell Inc.

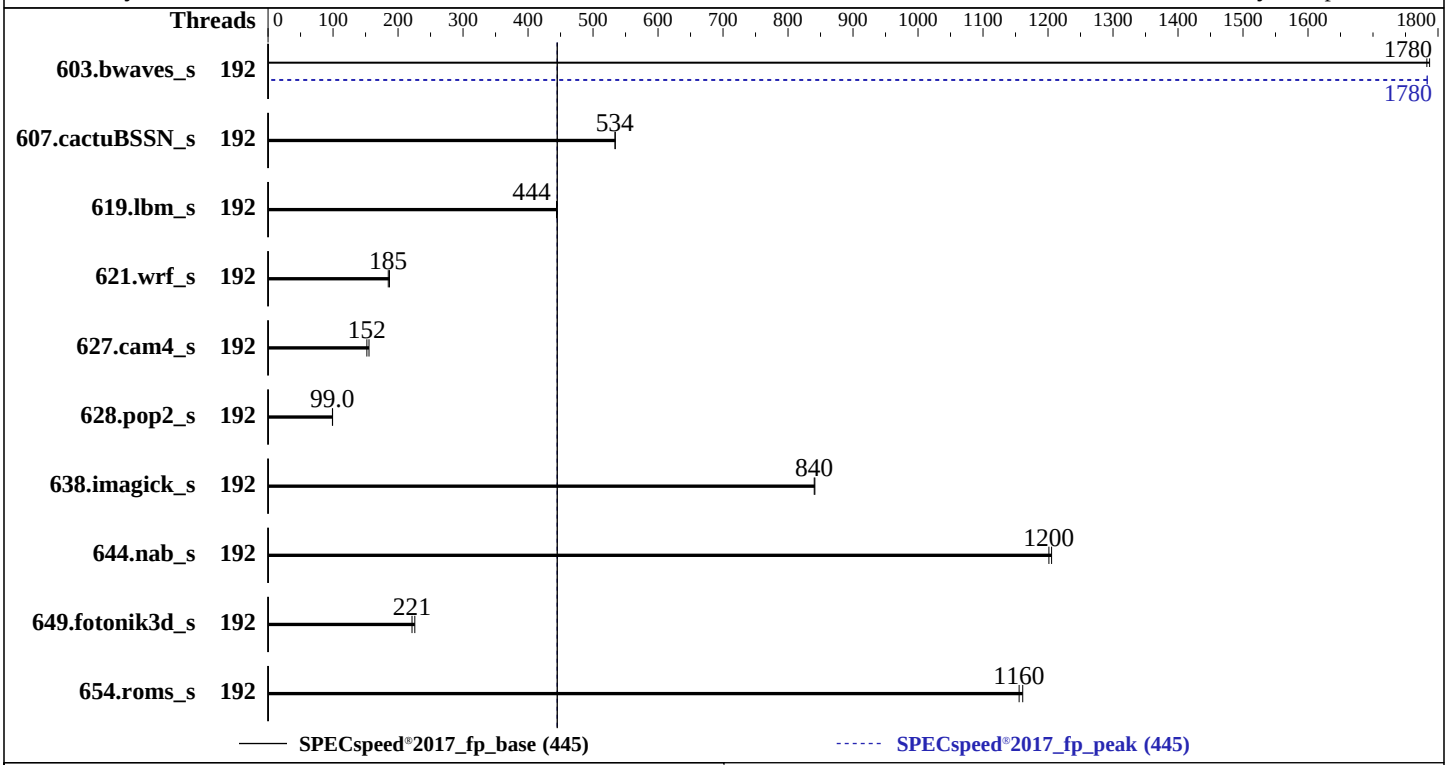
PowerEdge R770AP (Intel Xeon 6952P)

SPECspeed®2017_fp_base = 445

SPECspeed®2017_fp_peak = 445

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 6952P
Max MHz:	3900
Nominal:	2100
Enabled:	192 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:	480 MB I+D on chip per chip
Other:	None
Memory:	1536 GB (24 x 64 GB 2Rx4 PC5-6400B-R)
Storage:	190 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
603.bwaves_s	192	33.0	1790	**33.1**	**1780**			192	33.1	1780	**33.1**	**1780**		
607.cactuBSSN_s	192	**31.2**	**534**	31.2	534			192	**31.2**	**534**	31.2	534		
619.lbm_s	192	**11.8**	**444**	11.8	444			192	**11.8**	**444**	11.8	444		
621.wrf_s	192	**71.5**	**185**	70.8	187			192	**71.5**	**185**	70.8	187		
627.cam4_s	192	**58.3**	**152**	57.1	155			192	**58.3**	**152**	57.1	155		
628.pop2_s	192	120	99.3	**120**	**99.0**			192	120	99.3	**120**	**99.0**		
638.imagick_s	192	**17.2**	**840**	17.1	841			192	**17.2**	**840**	17.1	841		
644.nab_s	192	**14.5**	**1200**	14.5	1210			192	**14.5**	**1200**	14.5	1210		
649.fotonik3d_s	192	40.4	226	**41.2**	**221**			192	40.4	226	**41.2**	**221**		
654.roms_s	192	13.6	1160	**13.6**	**1160**			192	13.6	1160	**13.6**	**1160**		

SPECspeed®2017_fp_base = 445

SPECspeed®2017_fp_peak = 445

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,compact,1,0"
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 190 GB ramdisk created with the cmd: "mount -t tmpfs -o size=190G tmpfs /mnt/ramdisk"
```

Platform Notes

```
BIOS Settings:
          Sub NUMA Cluster : Enabled
              LLC Prefetch : 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 Thu Nov  6 14:37:07 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
   14:37:07 up 2 min,  2 users,  load average: 3.63, 4.64, 2.09
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU  WHAT
  root     tty1     -                14:34   26.00s  0.92s   ?    /bin/bash
  /home/DellFiles/bin/Intel/dell-run-speccpu.sh speed --define DL-VERS=6.4_T17 --output_format html,pdf,txt
  root     pts/0    100.71.232.237   14:36   44.00s  0.01s  0.01s -bash

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

------------------------------------------------------------
4. ulimit -a
```

(Continued on next page)

Platform Notes (Continued)

```
   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) 6189468
   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) 6189468
   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
 /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=192 --tune base,peak -o all --define
   smt-on --define drop_caches --iterations 2 --define DL-VERS=6.4_T17 --output_format html,pdf,txt fpspeed
 runcpu --nobuild --action validate --define default-platform-flags --configfile
   ic2025.2-linux64-graniterapids-speed-20250605.cfg --define cores=192 --tune base,peak --output_format all
   --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 fpspeed --nopreenv --note-preenv --logfile
   $SPEC/tmp/CPU2017.001/templogs/preenv.fpspeed.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) 6952P
    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       : 96
    siblings        : 192
    2 physical ids (chips)
    384 processors (hardware threads)
    physical id 0: core ids 0-31,64-95,128-159
    physical id 1: core ids 0-31,64-95,128-159
    physical id 0: apicids 0-63,128-191,256-319
    physical id 1: apicids 512-575,640-703,768-831
  Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for
  virtualized systems.  Use the above data carefully.
```

(Continued on next page)

Platform Notes (Continued)

```
------------------------------------------------------------
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):                               384
  On-line CPU(s) list:                  0-383
  Vendor ID:                            GenuineIntel
  Model name:                           Intel(R) Xeon(R) 6952P
  CPU family:                           6
  Model:                                173
  Thread(s) per core:                   2
  Core(s) per socket:                   96
  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:                            9 MiB (192 instances)
  L1i cache:                            12 MiB (192 instances)
  L2 cache:                             384 MiB (192 instances)
  L3 cache:                             960 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
                                        ,48,50,52,54,56,58,60,62,192,194,196,198,200,202,204,206,208,210,2
                                        12,214,216,218,220,222,224,226,228,230,232,234,236,238,240,242,244
                                        ,246,248,250,252,254
  NUMA node1 CPU(s):                    64,66,68,70,72,74,76,78,80,82,84,86,88,90,92,94,96,98,100,102,104,
                                        106,108,110,112,114,116,118,120,122,124,126,256,258,260,262,264,26
                                        6,268,270,272,274,276,278,280,282,284,286,288,290,292,294,296,298,
                                        300,302,304,306,308,310,312,314,316,318
  NUMA node2 CPU(s):                    128,130,132,134,136,138,140,142,144,146,148,150,152,154,156,158,16
                                        0,162,164,166,168,170,172,174,176,178,180,182,184,186,188,190,320,
                                        322,324,326,328,330,332,334,336,338,340,342,344,346,348,350,352,35
                                        4,356,358,360,362,364,366,368,370,372,374,376,378,380,382
  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
                                        ,49,51,53,55,57,59,61,63,193,195,197,199,201,203,205,207,209,211,2
```

(Continued on next page)

Platform Notes (Continued)

```
                                        13,215,217,219,221,223,225,227,229,231,233,235,237,239,241,243,245
                                        ,247,249,251,253,255
  NUMA node4 CPU(s):                    65,67,69,71,73,75,77,79,81,83,85,87,89,91,93,95,97,99,101,103,105,
                                        107,109,111,113,115,117,119,121,123,125,127,257,259,261,263,265,26
                                        7,269,271,273,275,277,279,281,283,285,287,289,291,293,295,297,299,
                                        301,303,305,307,309,311,313,315,317,319
  NUMA node5 CPU(s):                    129,131,133,135,137,139,141,143,145,147,149,151,153,155,157,159,16
                                        1,163,165,167,169,171,173,175,177,179,181,183,185,187,189,191,321,
                                        323,325,327,329,331,333,335,337,339,341,343,345,347,349,351,353,35
                                        5,357,359,361,363,365,367,369,371,373,375,377,379,381,383
  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       9M   12 Data            1     64        1             64
     L1i       64K      12M   16 Instruction     1     64        1             64
     L2         2M     384M   16 Unified         2   2048        1             64
     L3       480M     960M   16 Unified         3 491520        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:
  0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62,192,194,196,198,
  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
  node 0 size: 257593 MB
  node 0 free: 244761 MB
  node 1 cpus:
  64,66,68,70,72,74,76,78,80,82,84,86,88,90,92,94,96,98,100,102,104,106,108,110,112,114,116,118,120,122,124,1
  26,256,258,260,262,264,266,268,270,272,274,276,278,280,282,284,286,288,290,292,294,296,298,300,302,304,306,
  308,310,312,314,316,318
  node 1 size: 257983 MB
  node 1 free: 257718 MB
  node 2 cpus:
  128,130,132,134,136,138,140,142,144,146,148,150,152,154,156,158,160,162,164,166,168,170,172,174,176,178,180
  ,182,184,186,188,190,320,322,324,326,328,330,332,334,336,338,340,342,344,346,348,350,352,354,356,358,360,36
  2,364,366,368,370,372,374,376,378,380,382
  node 2 size: 258024 MB
  node 2 free: 257791 MB
  node 3 cpus:
  1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49,51,53,55,57,59,61,63,193,195,197,199,
```

(Continued on next page)

Platform Notes (Continued)

```
  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
  node 3 size: 258024 MB
  node 3 free: 257786 MB
  node 4 cpus:
  65,67,69,71,73,75,77,79,81,83,85,87,89,91,93,95,97,99,101,103,105,107,109,111,113,115,117,119,121,123,125,1
  27,257,259,261,263,265,267,269,271,273,275,277,279,281,283,285,287,289,291,293,295,297,299,301,303,305,307,
  309,311,313,315,317,319
  node 4 size: 258024 MB
  node 4 free: 257774 MB
  node 5 cpus:
  129,131,133,135,137,139,141,143,145,147,149,151,153,155,157,159,161,163,165,167,169,171,173,175,177,179,181
  ,183,185,187,189,191,321,323,325,327,329,331,333,335,337,339,341,343,345,347,349,351,353,355,357,359,361,36
  3,365,367,369,371,373,375,377,379,381,383
  node 5 size: 257946 MB
  node 5 free: 257712 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:       1584738196 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
                   chronyd dbus-broker 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         blk-availability boot-sysctl ca-certificates ca-certificates-setup chrony-wait
                   console-getty debug-shell dnsmasq firewalld gpm grub2-once hwloc-dump-hwdata
                   issue-add-ssh-keys kernel-sysctl kexec-load lastlog2-import lunmask lvm-devices-import
                   man-db-create multipathd 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-6.12.0-160000.4-default
  root=UUID=9b0401aa-833f-4a1e-8142-20520f9bf468
  mitigations=auto
  quiet
```

(Continued on next page)

Platform Notes (Continued)

```
  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

------------------------------------------------------------
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  190G  5.8G  185G   4% /mnt/ramdisk
```

(Continued on next page)

Platform Notes (Continued)

```
 ------------------------------------------------------------
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:
    15x 002C069D002C MTC40F2046S1RC64BD1 USFF 64 GB 2 rank 6400
    7x 002C069D002C MTC40F2046S1RC64BD2 QSFF 64 GB 2 rank 6400
    1x 00AD042300AD HMCG94AHBRA480N 64 GB 2 rank 6400
    1x 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               | 619.lbm_s(base, peak) 638.imagick_s(base, peak) 644.nab_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++, C, Fortran | 607.cactuBSSN_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.
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.
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.
--------------------------------------------------------------------------------------------------------------

==============================================================================================================
Fortran         | 603.bwaves_s(base, peak) 649.fotonik3d_s(base, peak) 654.roms_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.
--------------------------------------------------------------------------------------------------------------

==============================================================================================================
Fortran, C      | 621.wrf_s(base, peak) 627.cam4_s(base, peak) 628.pop2_s(base, peak)
--------------------------------------------------------------------------------------------------------------
```

(Continued on next page)

Compiler Version Notes (Continued)

```
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.
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.
------------------------------------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
icx

Fortran benchmarks:
ifx

Benchmarks using both Fortran and C:
ifx icx

Benchmarks using Fortran, C, and C++:
icpx icx ifx

Base Portability Flags

603.bwaves_s: -DSPEC_LP64
607.cactuBSSN_s: -DSPEC_LP64
619.lbm_s: -DSPEC_LP64
621.wrf_s: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
627.cam4_s: -DSPEC_LP64 -DSPEC_CASE_FLAG
628.pop2_s: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
-assume byterecl
638.imagick_s: -DSPEC_LP64
644.nab_s: -DSPEC_LP64
649.fotonik3d_s: -DSPEC_LP64
654.roms_s: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-w -std=c11 -m64 -Wl,-z,muldefs -xgraniterapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -mprefer-vector-width=512
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

(Continued on next page)

Base Optimization Flags (Continued)

Fortran benchmarks:
-w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xgraniterapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Benchmarks using both Fortran and C:
-w -m64 -std=c11 -Wl,-z,muldefs -xgraniterapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp
-DSPEC_OPENMP -Wno-implicit-int -mprefer-vector-width=512
-nostandard-realloc-lhs -align array32byte -auto
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Benchmarks using Fortran, C, and C++:
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xgraniterapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fiopenmp -DSPEC_OPENMP -Wno-implicit-int
-mprefer-vector-width=512 -nostandard-realloc-lhs -align array32byte
-auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

Peak Compiler Invocation

C benchmarks:
icx

Fortran benchmarks:
ifx

Benchmarks using both Fortran and C:
ifx icx

Benchmarks using Fortran, C, and C++:
icpx icx ifx

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

619.lbm_s: `basepeak = yes`

638.imagick_s: `basepeak = yes`

644.nab_s: `basepeak = yes`

Fortran benchmarks:

603.bwaves_s: `-w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xgraniterapids -Ofast -ffast-math -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp -nostandard-realloc-lhs -align array32byte -auto -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc`

649.fotonik3d_s: `basepeak = yes`

654.roms_s: `basepeak = yes`

Benchmarks using both Fortran and C:

621.wrf_s: `basepeak = yes`

627.cam4_s: `basepeak = yes`

628.pop2_s: `basepeak = yes`

Benchmarks using Fortran, C, and C++:

607.cactuBSSN_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

SPEC CPU and SPECspeed are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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 2025-11-06 08:37:06-0500.
Report generated on 2025-12-16 21:36:29 by CPU2017 PS formatter v6716.
Originally published on 2025-12-16.