SPEC CPU®2017 Integer Speed Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Cisco Systems

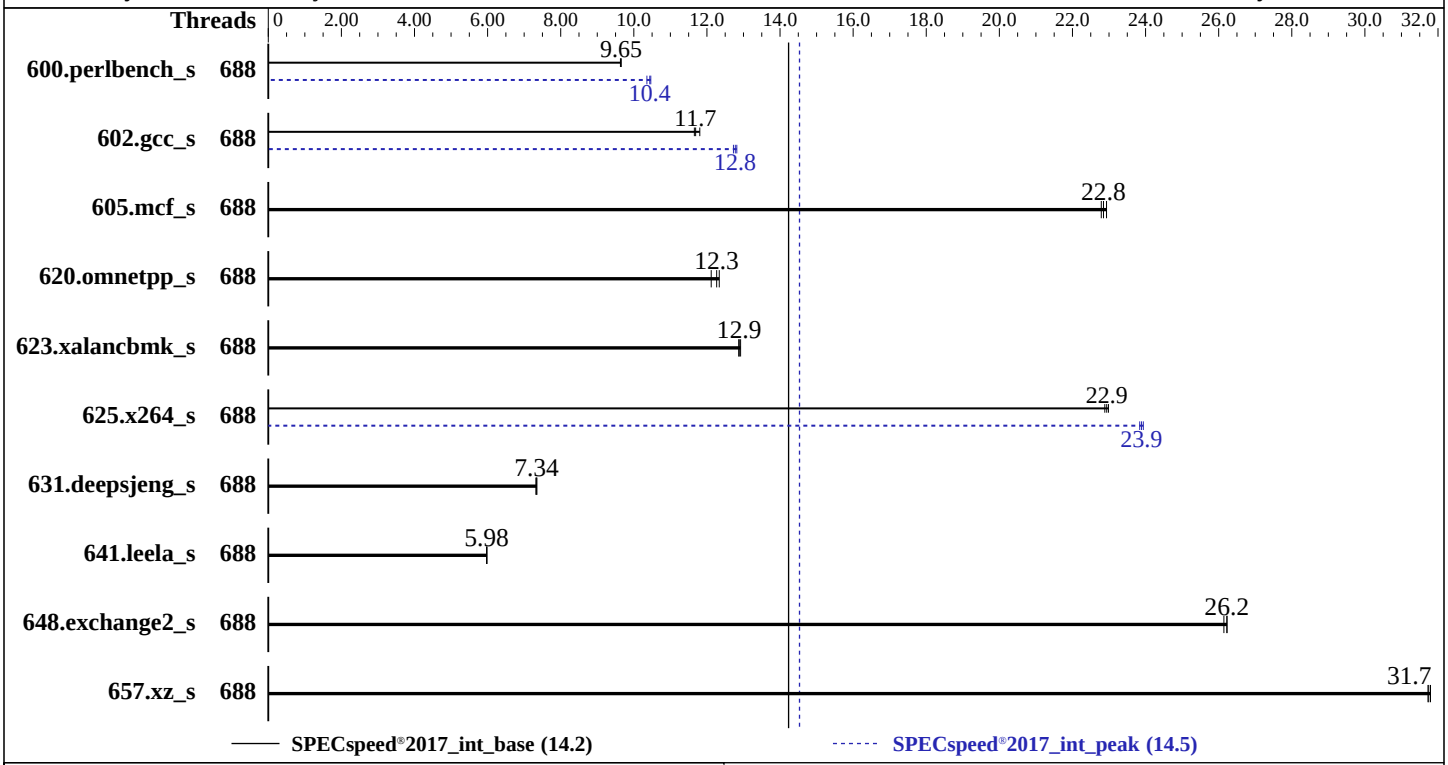
Cisco UCS X410 M8 (Intel Xeon 6788P 2.0 GHz processor)

SPECspeed®2017_int_base = 14.2

SPECspeed®2017_int_peak = 14.5

CPU2017 License: 9019
Test Sponsor: Cisco Systems
Tested by: Cisco Systems

Test Date: Mar-2026
Hardware Availability: May-2025
Software Availability: Jun-2025



Hardware

CPU Name:	Intel Xeon 6788P
Max MHz:	3800
Nominal:	2000
Enabled:	344 cores, 4 chips, 2 threads/core
Orderable:	2,4 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:	2 TB (32 x 64 GB 2Rx4 PC5-6400B-R)
Storage:	1 x 371G GB NVME SSD
Other:	CPU Cooling: Air

Software

OS:	SUSE Linux Enterprise Server 15 SP6 6.4.0-150600.21-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 6.0.1 released Jun-2025
File System:	btrfs
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 and OS set to prefer performance at the cost of additional power usage

SPEC CPU®2017 Integer Speed Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS X410 M8 (Intel Xeon 6788P 2.0 GHz processor)

SPECspeed®2017_int_base = 14.2

SPECspeed®2017_int_peak = 14.5

CPU2017 License: 9019
Test Sponsor: Cisco Systems
Tested by: Cisco Systems

Test Date: Mar-2026
Hardware Availability: May-2025
Software Availability: Jun-2025

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	688	**184**	**9.65**	184	9.63	184	9.65	688	170	10.5	171	10.4	**170**	**10.4**
602.gcc_s	688	337	11.8	342	11.7	**341**	**11.7**	688	**312**	**12.8**	313	12.7	311	12.8
605.mcf_s	688	206	22.9	207	22.8	**207**	**22.8**	688	206	22.9	207	22.8	**207**	**22.8**
620.omnetpp_s	688	135	12.1	**133**	**12.3**	132	12.3	688	135	12.1	**133**	**12.3**	132	12.3
623.xalancbmk_s	688	110	12.9	110	12.9	**110**	**12.9**	688	110	12.9	110	12.9	**110**	**12.9**
625.x264_s	688	76.7	23.0	77.1	22.9	**76.9**	**22.9**	688	73.7	23.9	74.0	23.8	**73.8**	**23.9**
631.deepsjeng_s	688	196	7.32	**195**	**7.34**	195	7.34	688	196	7.32	**195**	**7.34**	195	7.34
641.leela_s	688	285	5.98	285	5.98	**285**	**5.98**	688	285	5.98	285	5.98	**285**	**5.98**
648.exchange2_s	688	**112**	**26.2**	112	26.2	112	26.1	688	**112**	**26.2**	112	26.2	112	26.1
657.xz_s	688	194	31.8	**195**	**31.7**	195	31.7	688	194	31.8	**195**	**31.7**	195	31.7

SPECspeed®2017_int_base = 14.2

SPECspeed®2017_int_peak = 14.5

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

Submit Notes

```
The numactl mechanism was used to bind copies to processors. The config file option 'submit'
was used to generate numactl commands to bind each copy to a specific processor.
For details, please see the config file.
```

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 = "/home/cpu2017/lib/intel64:/home/cpu2017/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 Red Hat Enterprise Linux 8.4
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
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1)
is mitigated in the system as tested and documented.
```

(Continued on next page)

General Notes (Continued)

```
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)
is mitigated in the system as tested and documented.
 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
```

Platform Notes

```
BIOS settings:
Hardware prefetcher set to Enabled
Adjacent cache line prefetcher set to Enabled
Patrol scrub set to Disabled
XPT prefetch set to Auto
LLC prefetch set to Enabled
Enhanced CPU performance set to Auto

 Sysinfo program /home/cpu2017/bin/sysinfo
 Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
 running on localhost Thu Jul 31 22:53:30 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. who -r
 11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)
 12. Failed units, from systemctl list-units --state=failed
 13. Services, from systemctl list-unit-files
 14. Linux kernel boot-time arguments, from /proc/cmdline
 15. cpupower frequency-info
 16. tuned-adm active
 17. sysctl
 18. /sys/kernel/mm/transparent_hugepage
 19. /sys/kernel/mm/transparent_hugepage/khugepaged
 20. OS release
 21. Disk information
 22. /sys/devices/virtual/dmi/id
 23. dmidecode
 24. BIOS
 ------------------------------------------------------------

 ------------------------------------------------------------
 1. uname -a
   Linux localhost 6.4.0-150600.21-default #1 SMP PREEMPT_DYNAMIC Thu May 16 11:09:22 UTC 2024 (36c1e09)
   x86_64 x86_64 x86_64 GNU/Linux

 ------------------------------------------------------------
 2. w
```

(Continued on next page)

Platform Notes (Continued)

```
   22:53:30 up 18 min,  2 users,  load average: 0.00, 0.12, 0.38
  USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
  root     pts/0    10.29.148.194    22:42    2.00s  2.00s  0.00s -bash

------------------------------------------------------------
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) 8252487
  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) 8252487
  virtual memory          (kbytes, -v) unlimited
  file locks                      (-x) unlimited

------------------------------------------------------------
5. sysinfo process ancestry
 /usr/lib/systemd/systemd --switched-root --system --deserialize=42
 sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
 sshd: root [priv]
 sshd: root@pts/0
 -bash
 -bash
 runcpu --nobuild --action validate --define default-platform-flags -c
   ic2025.2-lin-graniterapids-speed-20250605.cfg --define cores=344 --tune base,peak -o all --define
   intspeedaffinity --define smt-on --define drop_caches intspeed
 runcpu --nobuild --action validate --define default-platform-flags --configfile
   ic2025.2-lin-graniterapids-speed-20250605.cfg --define cores=344 --tune base,peak --output_format all
   --define intspeedaffinity --define smt-on --define drop_caches --nopower --runmode speed --tune base:peak
   --size refspeed intspeed --nopreenv --note-preenv --logfile
   $SPEC/tmp/CPU2017.067/templogs/preenv.intspeed.067.0.log --lognum 067.0 --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : Intel(R) Xeon(R) 6788P
    vendor_id       : GenuineIntel
    cpu family      : 6
    model           : 173
    stepping        : 1
    microcode       : 0x10003c2
    bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
    cpu cores       : 86
    siblings        : 172
    4 physical ids (chips)
    688 processors (hardware threads)
    physical id 0: core ids 0-42,64-106
```

(Continued on next page)

Platform Notes (Continued)

```
     physical id 1: core ids 0-42,64-106
     physical id 2: core ids 0-42,64-106
     physical id 3: core ids 0-42,64-106
     physical id 0: apicids 0-85,128-213
     physical id 1: apicids 256-341,384-469
     physical id 2: apicids 512-597,640-725
     physical id 3: apicids 768-853,896-981
   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:                        46 bits physical, 57 bits virtual
   Byte Order:                           Little Endian
   CPU(s):                               688
   On-line CPU(s) list:                  0-687
   Vendor ID:                            GenuineIntel
   BIOS Vendor ID:                       Intel(R) Corporation
   Model name:                           Intel(R) Xeon(R) 6788P
   BIOS Model name:                      Intel(R) Xeon(R) 6788P  CPU @ 2.0GHz
   BIOS CPU family:                      179
   CPU family:                           6
   Model:                                173
   Thread(s) per core:                   2
   Core(s) per socket:                   86
   Socket(s):                            4
   Stepping:                             1
   Frequency boost:                      enabled
   CPU(s) scaling MHz:                   101%
   CPU max MHz:                          2001.0000
   CPU min MHz:                          800.0000
   BogoMIPS:                             4000.00
   Flags:                                fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat
                                         pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx
                                         pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good
                                         nopl xtopology nonstop_tsc cpuid aperfmperf tsc_known_freq pni
                                         pclmulqdq dtes64 monitor ds_cpl smx est tm2 ssse3 sdbg fma cx16 xtpr
                                         pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer
                                         aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb
                                         cat_l3 cat_l2 cdp_l3 intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp
                                         ibrs_enhanced fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms
                                         invpcid rtm cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma
                                         clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt
                                         xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
                                         cqm_mbm_local split_lock_detect user_shstk avx_vnni avx512_bf16
                                         wbnoinvd dtherm ida arat pln pts avx512vbmi umip pku ospke waitpkg
                                         avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnni avx512_bitalg tme
                                         avx512_vpopcntdq la57 rdpid bus_lock_detect cldemote movdiri
                                         movdir64b enqcmd fsrm md_clear serialize tsxldtrk pconfig arch_lbr
                                         ibt amx_bf16 avx512_fp16 amx_tile amx_int8 flush_l1d
                                         arch_capabilities
   L1d cache:                            16.1 MiB (344 instances)
   L1i cache:                            21.5 MiB (344 instances)
   L2 cache:                             688 MiB (344 instances)
   L3 cache:                             1.3 GiB (4 instances)
   NUMA node(s):                         8
```

(Continued on next page)

Platform Notes (Continued)

```
  NUMA node0 CPU(s):                    0-42,344-386
  NUMA node1 CPU(s):                    43-85,387-429
  NUMA node2 CPU(s):                    86-128,430-472
  NUMA node3 CPU(s):                    129-171,473-515
  NUMA node4 CPU(s):                    172-214,516-558
  NUMA node5 CPU(s):                    215-257,559-601
  NUMA node6 CPU(s):                    258-300,602-644
  NUMA node7 CPU(s):                    301-343,645-687
  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    16.1M   12 Data            1     64        1             64
     L1i       64K    21.5M   16 Instruction     1     64        1             64
     L2         2M     688M   16 Unified         2   2048        1             64
     L3       336M     1.3G   16 Unified         3 344064        1             64

------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 8 nodes (0-7)
  node 0 cpus: 0-42,344-386
  node 0 size: 257167 MB
  node 0 free: 256168 MB
  node 1 cpus: 43-85,387-429
  node 1 size: 258025 MB
  node 1 free: 257276 MB
  node 2 cpus: 86-128,430-472
  node 2 size: 258025 MB
  node 2 free: 257356 MB
  node 3 cpus: 129-171,473-515
  node 3 size: 257986 MB
  node 3 free: 257124 MB
  node 4 cpus: 172-214,516-558
  node 4 size: 258025 MB
  node 4 free: 257302 MB
  node 5 cpus: 215-257,559-601
  node 5 size: 258025 MB
  node 5 free: 257165 MB
  node 6 cpus: 258-300,602-644
  node 6 size: 258025 MB
  node 6 free: 257176 MB
  node 7 cpus: 301-343,645-687
  node 7 size: 257865 MB
  node 7 free: 256944 MB
  node distances:
```

(Continued on next page)

Platform Notes (Continued)

```
  node   0   1   2   3   4   5   6   7
    0:  10  12  21  21  21  21  21  21
    1:  12  10  21  21  21  21  21  21
    2:  21  21  10  12  21  21  21  21
    3:  21  21  12  10  21  21  21  21
    4:  21  21  21  21  10  12  21  21
    5:  21  21  21  21  12  10  21  21
    6:  21  21  21  21  21  21  10  12
    7:  21  21  21  21  21  21  12  10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       2112663508 kB

------------------------------------------------------------
10. who -r
  run-level 3 Jul 31 22:36

------------------------------------------------------------
11. Systemd service manager version: systemd 254 (254.10+suse.84.ge8d77af424)
  Default Target  Status
  multi-user      degraded

------------------------------------------------------------
12. Failed units, from systemctl list-units --state=failed
    UNIT         LOAD   ACTIVE SUB    DESCRIPTION
  * sep5.service loaded failed failed systemd script to load sep5 driver at boot time

------------------------------------------------------------
13. Services, from systemctl list-unit-files
  STATE            UNIT FILES
  enabled          YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron display-manager getty@ irqbalance
                   issue-generator kbdsettings klog lvm2-monitor nscd nvmefc-boot-connections
                   nvmf-autoconnect postfix purge-kernels rollback rsyslog sep5 smartd sshd systemd-pstore
                   wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny
  enabled-runtime  systemd-remount-fs
  disabled         autofs autoyast-initscripts blk-availability boot-sysctl ca-certificates chrony-wait
                   chronyd console-getty cups cups-browsed debug-shell ebtables exchange-bmc-os-info
                   firewalld fsidd gpm grub2-once haveged ipmi ipmievd issue-add-ssh-keys kexec-load lunmask
                   man-db-create multipathd nfs nfs-blkmap rpcbind rpmconfigcheck rsyncd serial-getty@
                   smartd_generate_opts snmpd snmptrapd systemd-boot-check-no-failures systemd-confext
                   systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd tuned
                   udisks2 vncserver@
  indirect         systemd-userdbd wickedd

------------------------------------------------------------
14. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default
  root=UUID=c9a29bb1-f95d-4e5a-816b-db69c8356128
  mitigations=auto
  quiet
  security=apparmor

------------------------------------------------------------
15. cpupower frequency-info
  analyzing CPU 646:
    current policy: frequency should be within 800 MHz and 2.00 GHz.
                    The governor "performance" may decide which speed to use
                    within this range.
    boost state support:
```

(Continued on next page)

Platform Notes (Continued)

```
      Supported: yes
      Active: yes

------------------------------------------------------------
16. tuned-adm active
  It seems that tuned daemon is not running, preset profile is not activated.
  Preset profile: latency-performance

------------------------------------------------------------
17. 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

------------------------------------------------------------
18. /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

------------------------------------------------------------
19. /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

------------------------------------------------------------
20. OS release
  From /etc/*-release /etc/*-version
  os-release SUSE Linux Enterprise Server 15 SP6

------------------------------------------------------------
21. Disk information
SPEC is set to: /home/cpu2017
  Filesystem     Type   Size  Used Avail Use% Mounted on
  /dev/nvme2n1p2 btrfs  371G   27G  341G   8% /home

------------------------------------------------------------
22. /sys/devices/virtual/dmi/id
```

(Continued on next page)

Platform Notes (Continued)

```
     Vendor:         Cisco Systems Inc
     Product:        UCSX-410C-M8
     Serial:         FVH2920P0DV

 ------------------------------------------------------------
 23. 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:
     1x 0xCE00 M321R8GA0PB2-CCPEC 64 GB 2 rank 6400
     18x 0xCE00 M321R8GA0PB2-CCPKC 64 GB 2 rank 6400
     13x 0xCE00 M321R8GA0PB2-CCPPC 64 GB 2 rank 6400


 ------------------------------------------------------------
 24. BIOS
 (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:       Cisco Systems, Inc.
    BIOS Version:      X410M8.6.0.1.81.0611252135
    BIOS Date:         06/11/2025
    BIOS Revision:     5.35
```

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

Base Compiler Invocation

C benchmarks:
icx

(Continued on next page)

Base Compiler Invocation (Continued)

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
-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

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

(Continued on next page)

Peak Optimization Flags (Continued)

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/Cisco-Platform-Settings-V2.0-GNR-revI.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/Cisco-Platform-Settings-V2.0-GNR-revI.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 2025-08-01 01:53:30-0400.
Report generated on 2026-05-12 12:47:58 by CPU2017 PS formatter v6716.
Originally published on 2026-05-12.