



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

CPU2017 License: 9019

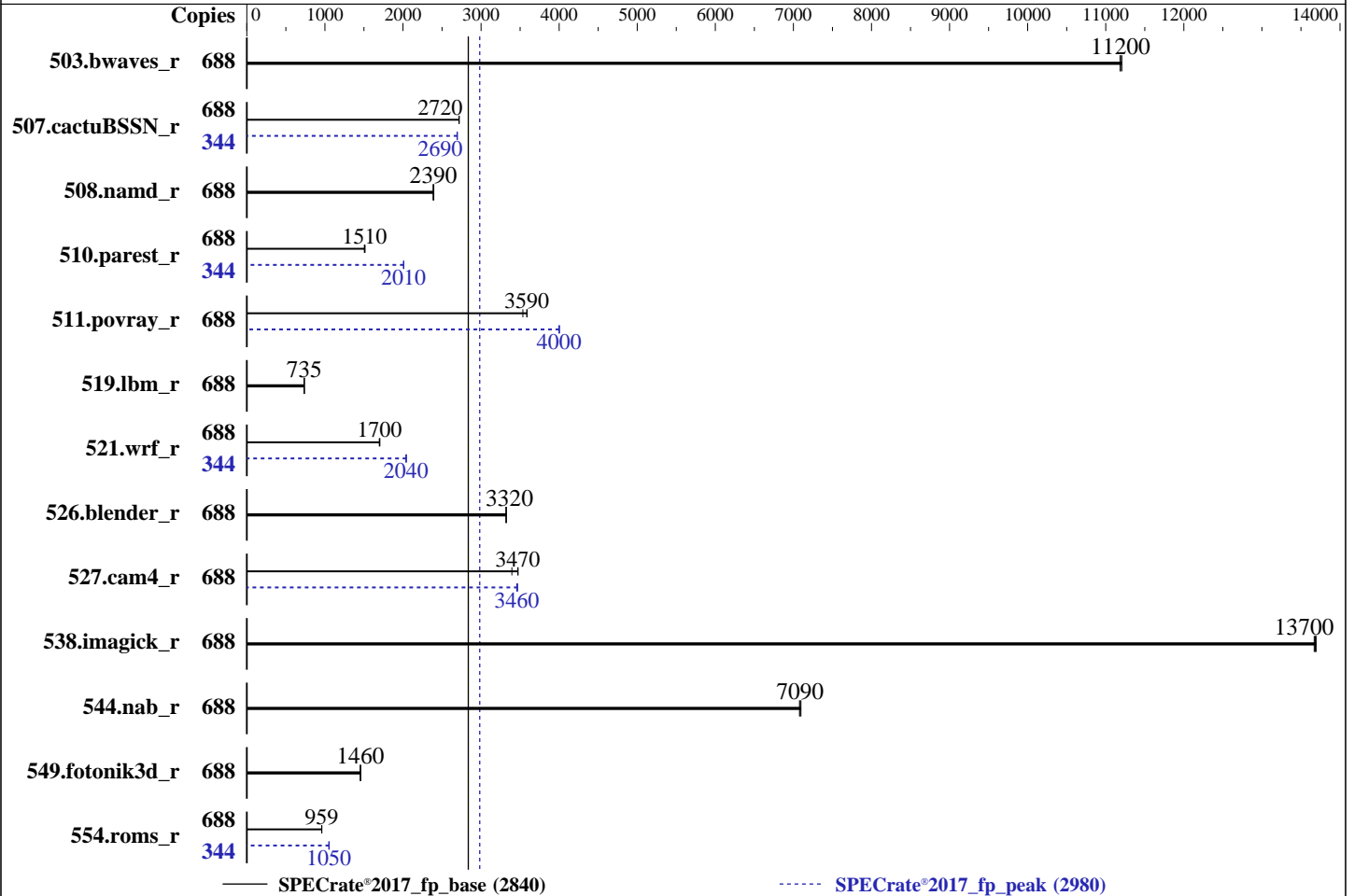
Test Sponsor: Cisco Systems

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: No  
 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 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

**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							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	688	616	11200	<b>617</b>	<b>11200</b>	617	11200	688	616	11200	<b>617</b>	<b>11200</b>	617	11200
507.cactuBSSN_r	688	<b>320</b>	<b>2720</b>	320	2720	320	2720	344	<b>162</b>	<b>2690</b>	161	2700	162	2690
508.namd_r	688	273	2390	274	2390	<b>274</b>	<b>2390</b>	688	273	2390	274	2390	<b>274</b>	<b>2390</b>
510.parest_r	688	1196	1500	<b>1191</b>	<b>1510</b>	1189	1510	344	<b>448</b>	<b>2010</b>	448	2010	448	2010
511.povray_r	688	454	3540	448	3590	<b>448</b>	<b>3590</b>	688	<b>401</b>	<b>4000</b>	401	4000	402	4000
519.lbm_r	688	986	735	986	736	<b>986</b>	<b>735</b>	688	986	735	986	736	<b>986</b>	<b>735</b>
521.wrf_r	688	905	1700	<b>905</b>	<b>1700</b>	908	1700	344	377	2040	<b>378</b>	<b>2040</b>	378	2040
526.blender_r	688	316	3320	<b>316</b>	<b>3320</b>	315	3320	688	316	3320	<b>316</b>	<b>3320</b>	315	3320
527.cam4_r	688	<b>347</b>	<b>3470</b>	346	3470	355	3390	688	348	3460	347	3470	<b>348</b>	<b>3460</b>
538.imagick_r	688	<b>125</b>	<b>13700</b>	125	13700	125	13700	688	<b>125</b>	<b>13700</b>	125	13700	125	13700
544.nab_r	688	<b>163</b>	<b>7090</b>	163	7100	164	7080	688	<b>163</b>	<b>7090</b>	163	7100	164	7080
549.fotonik3d_r	688	1840	1460	<b>1842</b>	<b>1460</b>	1845	1450	688	1840	1460	<b>1842</b>	<b>1460</b>	1845	1450
554.roms_r	688	<b>1139</b>	<b>959</b>	1138	960	1140	959	344	520	1050	<b>520</b>	<b>1050</b>	518	1060

SPECrate®2017\_fp\_base = **2840**

SPECrate®2017\_fp\_peak = **2980**

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:  
LD\_LIBRARY\_PATH = "/home/cpu2017/lib/intel64:/home/cpu2017/je5.0.1-64"  
MALLOC\_CONF = "retain:true"

## 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.

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Mar-2026

**Hardware Availability:** May-2025

**Software Availability:** Jun-2025

## General Notes (Continued)

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.

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 Disabled  
Patrol scrub set to Disabled  
XPT prefetch set to Disabled  
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 Mon May 12 05:47:42 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. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. tuned-adm active
16. sysctl
17. /sys/kernel/mm/transparent\_hugepage
18. /sys/kernel/mm/transparent\_hugepage/khugepaged
19. OS release
20. Disk information
21. /sys/devices/virtual/dmi/id
22. dmidecode
23. 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

-----

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

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

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

### Platform Notes (Continued)

```
2. w
   05:47:42 up 32 min,  1 user,  load average: 0.12, 0.05, 0.02
USER  TTY      FROM             LOGIN@   IDLE   JCPU   PCPU   WHAT
root  pts/0    10.29.148.194   05:46   6.00s  1.25s  0.02s  -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 -n 3 --action validate --define default-platform-flags --define numcopies=688 -c
   ic2025.2-lin-graniterapids-rate-20250605.cfg --define smt-on --define cores=344 --define physicalfirst
   --define invoke_with_interleave --define drop_caches --tune base,peak -o all fprate
   runcpu --nobuild --iterations 3 --action validate --define default-platform-flags --define numcopies=688
   --configfile ic2025.2-lin-graniterapids-rate-20250605.cfg --define smt-on --define cores=344 --define
   physicalfirst --define invoke_with_interleave --define drop_caches --tune base,peak --output_format all
   --nopower --runmode rate --tune base:peak --size refrate fprate --note-preenv --logfile
   $$SPEC/tmp/CPU2017.022/templogs/preenv.fprate.022.0.log --lognum 022.0 --from_runcpu 2
   specperl $$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)
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Mar-2026

**Hardware Availability:** May-2025

**Software Availability:** Jun-2025

### Platform Notes (Continued)

```

physical id 0: core ids 0-42,64-106
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
CPU(s) scaling MHz:         22%
CPU max MHz:                 3800.0000
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 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 hwp hwp_act_window hwp_epp
                             hwp_pkg_req 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_lld 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)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

CPU2017 License: 9019

Test Sponsor: Cisco Systems

Tested by: Cisco Systems

Test Date: Mar-2026

Hardware Availability: May-2025

Software Availability: Jun-2025

### 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/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2:            Mitigation; Enhanced / Automatic IBRS; IBPB conditional; RSB filling;
PBRSE-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: 256326 MB
node 1 cpus: 43-85,387-429
node 1 size: 258025 MB
node 1 free: 257080 MB
node 2 cpus: 86-128,430-472
node 2 size: 257986 MB
node 2 free: 257330 MB
node 3 cpus: 129-171,473-515
node 3 size: 258025 MB
node 3 free: 257310 MB
node 4 cpus: 172-214,516-558
node 4 size: 258025 MB
node 4 free: 257421 MB
node 5 cpus: 215-257,559-601
node 5 size: 258025 MB
node 5 free: 257330 MB
node 6 cpus: 258-300,602-644
node 6 size: 258025 MB
node 6 free: 257327 MB
node 7 cpus: 301-343,645-687
node 7 size: 257865 MB
node 7 free: 257153 MB
node distances:

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

CPU2017 License: 9019

Test Sponsor: Cisco Systems

Tested by: Cisco Systems

Test Date: Mar-2026

Hardware Availability: May-2025

Software Availability: Jun-2025

### 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: 2112663680 kB  
 -----

10. who -r  
 run-level 3 May 12 05:16  
 -----

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

12. Services, from systemctl list-unit-files  
 STATE UNIT FILES  
 enabled YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron display-manager getty@ irqbalance  
 issue-generator kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections  
 nvme-fc-autoconnect postfix purge-kernels rollback rsyslog 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 ebttables exchange-bmc-os-info  
 firewallld 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-sysextd systemd-time-wait-sync systemd-timesyncd tuned  
 udisks2 vncserver@  
 indirect systemd-userdbd wickedd  
 -----

13. Linux kernel boot-time arguments, from /proc/cmdline  
 BOOT\_IMAGE=/boot/vmlinuz-6.4.0-150600.21-default  
 root=UUID=c9a29bb1-f95d-4e5a-816b-db69c8356128  
 splash=silent  
 mitigations=auto  
 quiet  
 security=apparmor  
 -----

14. cpupower frequency-info  
 analyzing CPU 655:  
 current policy: frequency should be within 800 MHz and 3.80 GHz.  
 The governor "performance" may decide which speed to use  
 within this range.  
 boost state support:  
 Supported: yes  
 Active: yes  
 -----

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Mar-2026

**Hardware Availability:** May-2025

**Software Availability:** Jun-2025

### Platform Notes (Continued)

15. tuned-adm active  
Current active profile: latency-performance

```

16. sysctl
kernel.numa_balancing      1
kernel.randomize_va_space  2
vm.compaction_proactiveness 20
vm.dirty_background_bytes  0
vm.dirty_background_ratio  3
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              10
vm.watermark_boost_factor  15000
vm.watermark_scale_factor   10
vm.zone_reclaim_mode       0

```

```

17. /sys/kernel/mm/transparent_hugepage
defrag      always defer defer+madvice [madvice] never
enabled     [always] madvice never
hpage_pmd_size 2097152
shmem_enabled always within_size advise [never] deny force

```

```

18. /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

```

```

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

```

```

20. Disk information
SPEC is set to: /home/cpu2017
Filesystem Type Size Used Avail Use% Mounted on
/dev/nvme0n1p2 btrfs 371G 24G 343G 7% /home

```

```

21. /sys/devices/virtual/dmi/id
Vendor:      Cisco Systems Inc
Product:     UCSX-410C-M8
Serial:      FVH2920P0DV

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Mar-2026

**Hardware Availability:** May-2025

**Software Availability:** Jun-2025

## Platform Notes (Continued)

### 22. 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

### 23. 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 | 519.lbm\_r(base, peak) 538.imagick\_r(base, peak) 544.nab\_r(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++ | 508.namd\_r(base, peak) 510.parest\_r(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 | 511.povray\_r(base, peak) 526.blender\_r(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.  
=====

=====  
C++, C, Fortran | 507.cactuBSSN\_r(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 | 503.bwaves\_r(base, peak) 549.fotonik3d\_r(base, peak) 554.roms\_r(base, peak)  
=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605  
=====

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Mar-2026

**Hardware Availability:** May-2025

**Software Availability:** Jun-2025

## Compiler Version Notes (Continued)

Copyright (C) 1985-2025 Intel Corporation. All rights reserved.

-----  
Fortran, C | 521.wrf\_r(base, peak) 527.cam4\_r(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.

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

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using both C and C++:

icpx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## Base Portability Flags

503.bwaves\_r: -DSPEC\_LP64

507.cactuBSSN\_r: -DSPEC\_LP64

508.namd\_r: -DSPEC\_LP64

510.parest\_r: -DSPEC\_LP64

511.povray\_r: -DSPEC\_LP64

519.lbm\_r: -DSPEC\_LP64

521.wrf\_r: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG -convert big\_endian

526.blender\_r: -DSPEC\_LP64 -DSPEC\_LINUX -funsigned-char

527.cam4\_r: -DSPEC\_LP64 -DSPEC\_CASE\_FLAG

538.imagick\_r: -DSPEC\_LP64

544.nab\_r: -DSPEC\_LP64

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Mar-2026

**Hardware Availability:** May-2025

**Software Availability:** Jun-2025

## Base Portability Flags (Continued)

549.fotonik3d\_r: -DSPEC\_LP64

554.roms\_r: -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
-Wno-implicit-int -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

### C++ benchmarks:

```
-w -std=c++14 -m64 -Wl,-z,muldefs -xgraniterapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

### Fortran benchmarks:

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

### 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
-Wno-implicit-int -mprefer-vector-width=512 -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

### Benchmarks using both 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 -Wno-implicit-int -mprefer-vector-width=512
-ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

### Benchmarks using Fortran, C, and C++:

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



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Mar-2026

**Hardware Availability:** May-2025

**Software Availability:** Jun-2025

## Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using both C and C++:

icpx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

519.lbm\_r: basepeak = yes

538.imagick\_r: basepeak = yes

544.nab\_r: basepeak = yes

C++ benchmarks:

508.namd\_r: basepeak = yes

510.parest\_r: -w -std=c++14 -m64 -Wl,-z,muldefs -xgraniterapids  
-Ofast -ffast-math -flto -mfpmath=sse -funroll-loops  
-qopt-mem-layout-trans=4 -mprefer-vector-width=512  
-ljemalloc -L/usr/local/jemalloc64-5.0.1/lib

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Mar-2026

**Hardware Availability:** May-2025

**Software Availability:** Jun-2025

## Peak Optimization Flags (Continued)

Fortran benchmarks:

503.bwaves\_r: basepeak = yes

549.fotonik3d\_r: basepeak = yes

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

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
-Wno-implicit-int -mprefer-vector-width=512 -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both C and C++:

```
511.povray_r: -w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -Wno-implicit-int
-mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

526.blender\_r: basepeak = yes

Benchmarks using Fortran, C, and C++:

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

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®2017 Floating Point Rate Result

Copyright 2017-2026 Standard Performance Evaluation Corporation

## Cisco Systems

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

SPECrate®2017\_fp\_base = 2840

SPECrate®2017\_fp\_peak = 2980

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Mar-2026

**Hardware Availability:** May-2025

**Software Availability:** Jun-2025

SPEC CPU and SPECrate 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](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.9 on 2025-05-12 08:47:41-0400.

Report generated on 2026-05-12 12:48:20 by CPU2017 PDF formatter v6716.

Originally published on 2026-05-12.