SPEC CPU®2026 Floating Point Rate Result

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Cisco Systems

(Test Sponsor: Cisco Systems)

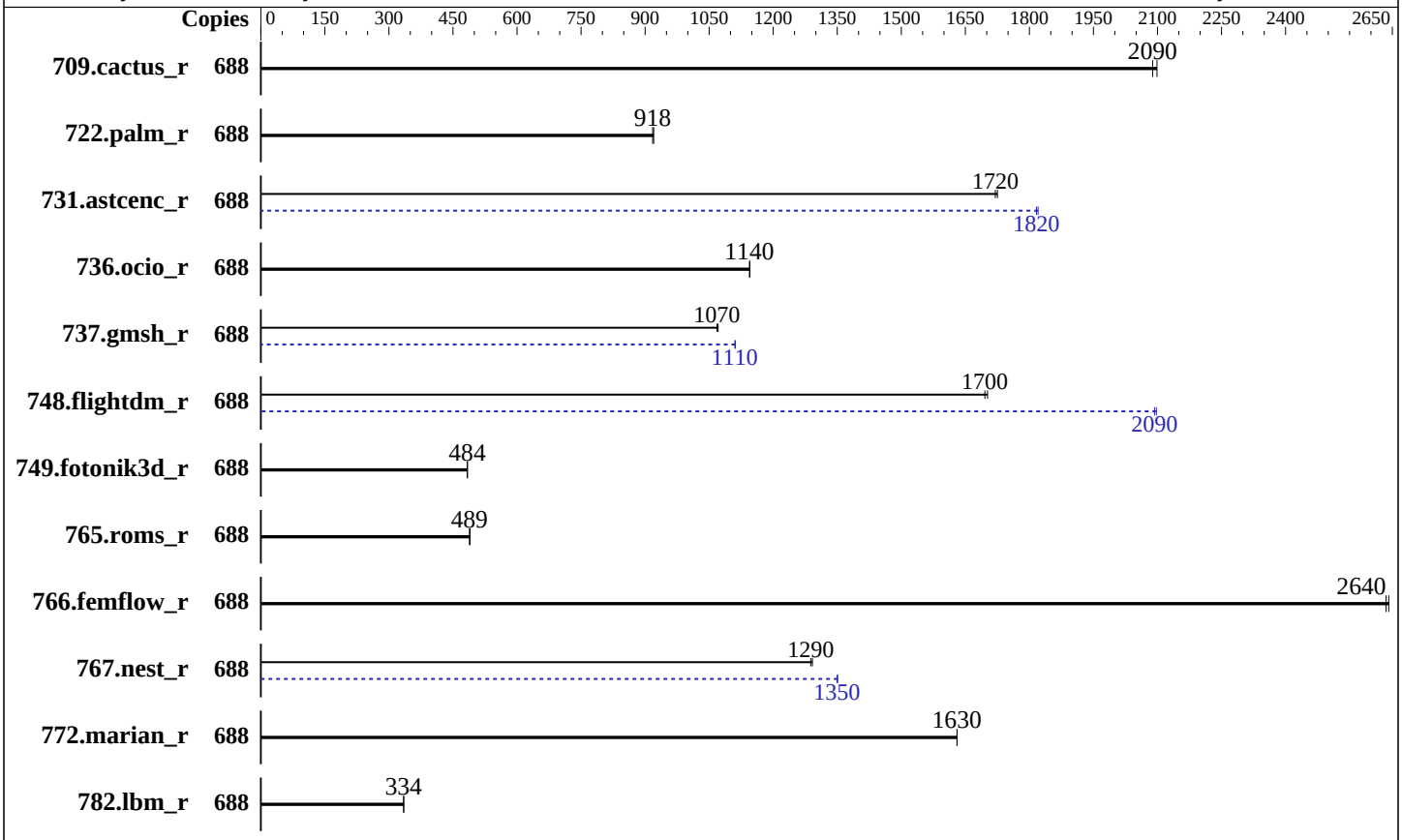
Cisco UCS X410c M8 (Intel Xeon 6788P 2.0 GHz processor)

SPECrate®2026_fp_base = 1100

SPECrate®2026_fp_peak = 1130

CPU2026 License: 9019
Test Sponsor: Cisco Systems
Tested by: Cisco Systems

Test Date: Feb-2026
Hardware Availability: Feb-2026
Software Availability: Jan-2026



Hardware

CPU Name:	Intel Xeon 6788P
Max MHz:	3800
Nominal:	2000
Enabled:	172 cores, 4 chips, 2 threads/core
Orderable:	1,2,3,4 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 960 GB NVMe SSD
Cooling:	Air
Other:	None

Software

OS:	Red Hat Enterprise Linux 10.0 (Coughlan) 6.12.0-55.9.1.el10_0.x86_64
Compiler:	C/C++: Version 2025.3 of Intel oneAPI DPC++/C++ Compiler for Linux; Fortran: Version 2025.3 of Intel Fortran Compiler for Linux;
Compiler Category:	Vendor
Firmware:	Version 6.0.2.79 released Dec-2025
File System:	xfs
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other:	jemalloc memory allocator v5.3
Power Management:	BIOS and OS set to prefer performance at the cost of additional power usage

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
709.cactus_r	688	281	2100	**283**	**2090**			688	281	2100	**283**	**2090**		
722.palm_r	688	**990**	**918**	987	920			688	**990**	**918**	987	920		
731.astcenc_r	688	335	1730	**336**	**1720**			688	**318**	**1820**	317	1820		
736.ocio_r	688	**526**	**1140**	526	1150			688	**526**	**1140**	526	1150		
737.gmsh_r	688	**296**	**1070**	295	1070			688	**284**	**1110**	284	1110		
748.flightdm_r	688	**291**	**1700**	289	1700			688	235	2100	**235**	**2090**		
749.fotonik3d_r	688	**1645**	**484**	1643	484			688	**1645**	**484**	1643	484		
765.roms_r	688	2212	490	**2218**	**489**			688	2212	490	**2218**	**489**		
766.femflow_r	688	382	2640	**383**	**2640**			688	382	2640	**383**	**2640**		
767.nest_r	688	422	1290	**424**	**1290**			688	**404**	**1350**	404	1350		
772.marian_r	688	666	1630	**666**	**1630**			688	666	1630	**666**	**1630**		
782.lbm_r	688	**1179**	**334**	1177	335			688	**1179**	**334**	1177	335		

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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 = "/data/cpu2026.902/lib"
MALLOC_CONF = "retain:true"
```

General Notes

```
Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM
memory using CentOS Stream 9.
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
sync; echo 3>       /proc/sys/vm/drop_caches
```

(Continued on next page)

General Notes (Continued)

```
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
jemalloc, a general purpose malloc implementation
built with the CentOS Stream 9, and the system compiler gcc 11.5.0
sources available from jemalloc.net or https://github.com/jemalloc/jemalloc/releases
```

Platform Notes

```
BIOS Settings:
Sub NUMA clustering set to Enabled
Hardware prefetcher set to Enabled
Adjacent cache line prefetcher set to Disabled
LLC Prefetch set to Enabled
XPT Prefetch set to Disabled
Enhanced CPU Performance set to Auto

Sysinfo program /data/cpu2026.902/bin/sysinfo
Rev: 069f95da7e7f5d81b2ce48a82150e54f
running on rhel10m2 Mon Feb  2 17:58:41 2026

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

------------------------------------------------------------
Table of contents
------------------------------------------------------------
 1. uname -srvm
 2. w
 3. Username
 4. ulimit -a
 5. sysinfo process ancestry
 6. /proc/cpuinfo
 7. lscpu
 8. numactl --hardware
 9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 257 (257-9.el10_0.1-g8cd5633)
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
```

(Continued on next page)

Platform Notes (Continued)

```
21. /sys/devices/virtual/dmi/id
22. dmidecode
23. BIOS
------------------------------------------------------------

------------------------------------------------------------
1. uname -srvm
  Linux 6.12.0-55.9.1.el10_0.x86_64 #1 SMP PREEMPT_DYNAMIC Tue Mar 25 09:14:09 EDT 2025 x86_64

------------------------------------------------------------
2. w
   17:58:41 up  6:11,  2 users,  load average: 257.26, 546.56, 607.16
  USER     TTY        LOGIN@   IDLE   JCPU   PCPU WHAT
  root               11:48    6:11m  0.00s  0.01s sshd-session: root [priv]
  root               11:48    6:11m  0.00s  0.39s /usr/lib/systemd/systemd --user

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

------------------------------------------------------------
4. ulimit -a
  real-time non-blocking time  (microseconds, -R) unlimited
  core file size              (blocks, -c) unlimited
  data seg size               (kbytes, -d) unlimited
  scheduling priority                 (-e) 0
  file size                   (blocks, -f) unlimited
  pending signals                     (-i) 8251819
  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) 8251819
  virtual memory              (kbytes, -v) unlimited
  file locks                          (-x) unlimited

------------------------------------------------------------
5. sysinfo process ancestry
 /usr/lib/systemd/systemd --switched-root --system --deserialize=51 rhgb
 sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
 sshd-session: root [priv]
 sshd-session: root@pts/0
 -bash
```

(Continued on next page)

Platform Notes (Continued)

```
 /bin/sh ./runrate.2026.rc2.sh
 runcpu --nobuild --reportable --action validate --define default-platform-flags --copies 688 -c
   ic2025.3-graniterapids-cpu2026-0.902-rate-20260121.cfg --define smt-on --define cores=344 --define
   physicalfirst --define invoke_with_interleave --define drop_caches --tune base,peak -o all fprate
 runcpu --nobuild --reportable --action validate --define default-platform-flags --copies 688 --configfile
   ic2025.3-graniterapids-cpu2026-0.902-rate-20260121.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 --nopreenv --note-preenv --logfile
    $SPEC/tmp/CPU2026.004/templogs/preenv.fprate.004.0.log --lognum 004.0 --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /data/cpu2026.902

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : Intel(R) Xeon(R) 6788P
    vendor_id       : GenuineIntel
    cpu family      : 6
    model           : 173
    stepping        : 1
    microcode       : 0x1000405
    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
    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 2.40.2:
  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
```

(Continued on next page)

Platform Notes (Continued)

```
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 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 hwp hwp_act_window hwp_epp hwp_pkg_req 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:                            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
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
```

(Continued on next page)

Platform Notes (Continued)

```
  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: 236162 MB
  node 1 cpus: 43-85,387-429
  node 1 size: 257977 MB
  node 1 free: 237474 MB
  node 2 cpus: 86-128,430-472
  node 2 size: 258025 MB
  node 2 free: 237479 MB
  node 3 cpus: 129-171,473-515
  node 3 size: 258025 MB
  node 3 free: 237300 MB
  node 4 cpus: 172-214,516-558
  node 4 size: 258025 MB
  node 4 free: 237552 MB
  node 5 cpus: 215-257,559-601
  node 5 size: 258025 MB
  node 5 free: 237549 MB
  node 6 cpus: 258-300,602-644
```

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Platform Notes (Continued)

```
  node 6 size: 258025 MB
  node 6 free: 237619 MB
  node 7 cpus: 301-343,645-687
  node 7 size: 257989 MB
  node 7 free: 237645 MB
  node distances:
  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:       2112780592 kB

------------------------------------------------------------
10. who -r
  run-level 3 Feb 2 11:48 last=5

------------------------------------------------------------
11. Systemd service manager version: systemd 257 (257-9.el10_0.1-g8cd5633)
  Default Target  Status
  graphical       running

------------------------------------------------------------
12. Services, from systemctl list-unit-files
  STATE            UNIT FILES
  enabled          ModemManager NetworkManager NetworkManager-dispatcher NetworkManager-wait-online
                   accounts-daemon atd audit-rules auditd avahi-daemon bluetooth chronyd crond cups
                     dbus-broker fips-crypto-policy-overlay gdm getty@ gnome-remote-desktop
                   insights-client-boot ipmi irqbalance iscsi-onboot iscsi-starter kdump libstoragemgmt
                    lm_sensors lvm2-monitor mcelog mdmonitor multipathd nvmefc-boot-connections pmie
                   qemu-guest-agent rhsmcertd rpcbind rsyslog rtkit-daemon selinux-autorelabel-mark sep5
                   smartd sshd sssd switcheroo-control sysstat systemd-confext systemd-network-generator
                    systemd-pstore systemd-sysext tuned tuned-ppd udisks2 upower vgauthd vmtoolsd
  enabled-runtime  systemd-remount-fs
  disabled         arp-ethers autofs blk-availability brltty canberra-system-bootup canberra-system-shutdown
                   canberra-system-shutdown-reboot chrony-wait chronyd-restricted console-getty cups-browsed
                   cxl-monitor dbus-daemon debug-shell dhcpcd dhcpcd@ dnf-system-upgrade dnsmasq fancontrol
                     fcoe firewalld fsidd gnome-headless-session@ gnome-remote-desktop-configuration
                   grafana-server gssproxy hwloc-dump-hwdata hypervfcopyd ipsec iscsi-init iscsid iscsiuio
                       kpatch kvm_stat ledmon lldpad low-memory-monitor lvm-devices-import
```

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Platform Notes (Continued)

```
                 man-db-restart-cache-update microcode netavark-dhcp-proxy netavark-firewalld-reload
                 nfs-blkmap nfs-server nftables nis-domainname nvmf-autoconnect pesign pmcd pmfind
                 pmie_farm pmlogger pmlogger_farm pmproxy postfix powertop psacct ras-mc-ctl rasdaemon rhsm
                 rhsm-facts rpmdb-migrate rpmdb-rebuild rrdcached selinux-check-proper-disable
                 serial-getty@ snmpd snmptrapd speech-dispatcherd ssh-host-keys-migration sshd-keygen@
                 systemd-boot-check-no-failures systemd-boot-update systemd-pcrlock-file-system
                 systemd-pcrlock-firmware-code systemd-pcrlock-firmware-config systemd-pcrlock-machine-id
                 systemd-pcrlock-make-policy systemd-pcrlock-secureboot-authority
                 systemd-pcrlock-secureboot-policy systemd-udev-load-credentials target targetclid tmux@
                 tog-pegasus trace-cmd wpa_supplicant wsdd yggdrasil yggdrasil@
  indirect       iscsi pcscd spice-vdagentd sshd@ sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh
                 sssd-sudo systemd-sysupdate systemd-sysupdate-reboot systemd-userdbd

------------------------------------------------------------
13. Linux kernel boot-time arguments, from /proc/cmdline
  BOOT_IMAGE=/boot/vmlinuz-6.12.0-55.9.1.el10_0.x86_64
  root=UUID=d9aed970-6a0b-476c-8b56-d8dbad15987a
  ro
  rhgb
  quiet
  LANG=en_US.UTF-8
  selinux=0

------------------------------------------------------------
14. cpupower frequency-info
  analyzing CPU 201:
    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

------------------------------------------------------------
15. tuned-adm active
  Current active profile: throughput-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          10
  vm.dirty_bytes                      0
  vm.dirty_expire_centisecs        3000
  vm.dirty_ratio                     40
```

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Platform Notes (Continued)

```
  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+madvise [madvise] never
  enabled         [always] madvise 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     Red Hat Enterprise Linux 10.0 (Coughlan)
  redhat-release Red Hat Enterprise Linux release 10.0 (Coughlan)
  system-release Red Hat Enterprise Linux release 10.0 (Coughlan)

------------------------------------------------------------
20. Disk information
SPEC is set to: /data/cpu2026.902
  Filesystem     Type  Size  Used Avail Use% Mounted on
  /dev/nvme0n1p2 xfs   893G  517G  377G  58% /data

------------------------------------------------------------
21. /sys/devices/virtual/dmi/id
    Vendor:         Cisco Systems Inc
    Product:        UCSX-410C-M8
    Serial:         FVH2920P07M
```

(Continued on next page)

Platform Notes (Continued)

```
 ------------------------------------------------------------
 22. 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:
      32x 0x2C00 MTC40F2046S1RC64BD2 UXCC 64 GB 2 rank 6400


 ------------------------------------------------------------
 23. BIOS
 (This section combines info from /sys/devices and dmidecode.)
    BIOS Vendor:       Cisco Systems, Inc.
    BIOS Version:      X410M8.6.0.2.79.1202251035
    BIOS Date:         12/02/2025
    BIOS Revision:     5.35
```

Compiler Version Notes

```
==============================================================================
C       | 782.lbm_r(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
C++     | 731.astcenc_r(base, peak) 736.ocio_r(base, peak)
        | 748.flightdm_r(base, peak) 766.femflow_r(base, peak)
        | 767.nest_r(base, peak) 772.marian_r(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
C++, C  | 709.cactus_r(base, peak) 737.gmsh_r(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
```

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Compiler Version Notes (Continued)

```
==============================================================================
Fortran | 722.palm_r(base, peak) 749.fotonik3d_r(base, peak) 765.roms_r(base,
        | peak)
------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version
  2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

Benchmarks using both C and C++:
icpx icx

Base Portability Flags

709.cactus_r: -DSPEC_LP64
722.palm_r: -DSPEC_LP64
731.astcenc_r: -DSPEC_LP64
736.ocio_r: -DSPEC_LP64
737.gmsh_r: -DSPEC_LP64 -fno-associative-math
748.flightdm_r: -DSPEC_LP64
749.fotonik3d_r: -DSPEC_LP64
765.roms_r: -DSPEC_LP64
766.femflow_r: -DSPEC_LP64
767.nest_r: -DSPEC_LP64
772.marian_r: -DSPEC_LP64
782.lbm_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
```
-m64 -std=c18 -Wl,-z,muldefs -xgraniterapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib
-ljemalloc
```

C++ benchmarks:
```
-m64 -std=c++17 -Wl,-z,muldefs -xgraniterapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib
-ljemalloc
```

Fortran benchmarks:
```
-m64 -stand f18 -Wl,-z,muldefs -xgraniterapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc-5.3.0/lib -ljemalloc
```

Benchmarks using both C and C++:
```
-m64 -std=c++17 -std=c18 -Wl,-z,muldefs -xgraniterapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib
-ljemalloc
```

Peak Compiler Invocation

C benchmarks:
```
icx
```

C++ benchmarks:
```
icpx
```

Fortran benchmarks:
```
ifx
```

Benchmarks using both C and C++:
```
icpx icx
```

Peak Portability Flags

```
Same as Base Portability Flags
```

Peak Optimization Flags

C benchmarks:

782.lbm_r: `basepeak = yes`

C++ benchmarks:

731.astcenc_r: `-m64 -std=c++17 -Wl,-z,muldefs -fprofile-generate`(pass 1)
`-fprofile-use=default.profdata`(pass 2) `-xHost`(pass 1)
`-ffp-model=fast -xgraniterapids`(pass 2) `-flto`
`-mprefer-vector-width=512 -qopt-mem-layout-trans=4 -O3`
`-mfpmath=sse -funroll-loops`
`-L/usr/local/jemalloc-5.3.0/lib -ljemalloc`

736.ocio_r: `basepeak = yes`

748.flightdm_r: `Same as 731.astcenc_r`

766.femflow_r: `basepeak = yes`

767.nest_r: `Same as 731.astcenc_r`

772.marian_r: `basepeak = yes`

Fortran benchmarks:

722.palm_r: `basepeak = yes`

749.fotonik3d_r: `basepeak = yes`

765.roms_r: `basepeak = yes`

Benchmarks using both C and C++:

709.cactus_r: `basepeak = yes`

737.gmsh_r: `-m64 -std=c++17 -std=c18 -Wl,-z,muldefs`
`-fprofile-generate`(pass 1)
`-fprofile-use=default.profdata`(pass 2) `-xHost`(pass 1)
`-ffp-model=fast -xgraniterapids`(pass 2) `-flto`
`-mprefer-vector-width=512 -qopt-mem-layout-trans=4 -O3`
`-mfpmath=sse -funroll-loops`
`-L/usr/local/jemalloc-5.3.0/lib -ljemalloc`

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2026/results/flags/Intel-ic2025-official-linux64-cpu2026-0.902.html
http://www.spec.org/cpu2026/results/flags/Cisco-Platform-Settings-V1.2-GNR-revE.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2026/results/flags/Intel-ic2025-official-linux64-cpu2026-0.902.xml
http://www.spec.org/cpu2026/results/flags/Cisco-Platform-Settings-V1.2-GNR-revE.xml

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

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