



SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2024 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C240 M7 (Intel Xeon Platinum 8571N, 2.40GHz)

SPECspeed®2017_fp_base = 261

SPECspeed®2017_fp_peak = 261

CPU2017 License: 9019

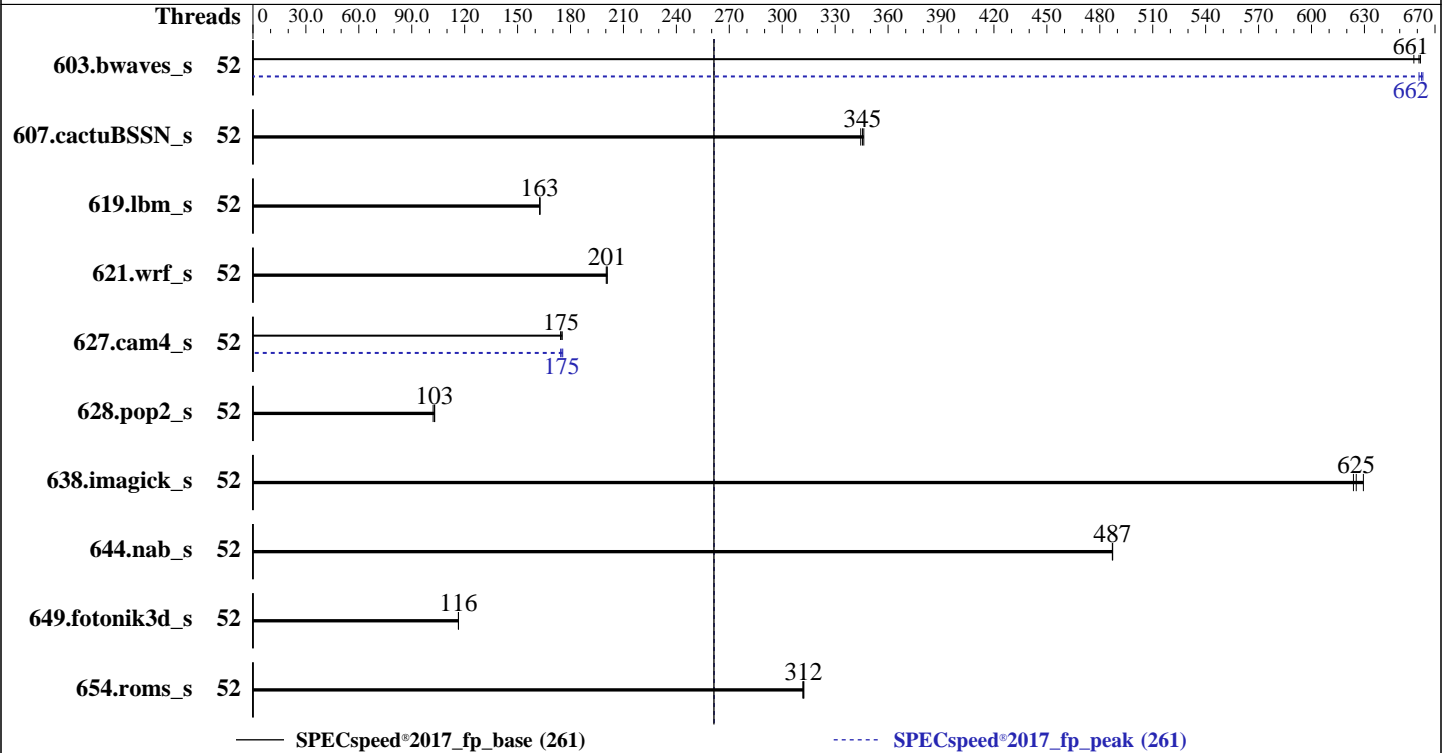
Test Sponsor: Cisco Systems

Tested by: Cisco Systems

Test Date: Apr-2024

Hardware Availability: Feb-2024

Software Availability: Dec-2023



Hardware

CPU Name: Intel Xeon Platinum 8571N
 Max MHz: 4000
 Nominal: 2400
 Enabled: 52 cores, 1 chip
 Orderable: 1 Chips
 Cache L1: 32 KB I + 48 KB D on chip per core
 L2: 2 MB I+D on chip per core
 L3: 300 MB I+D on chip per chip
 Other: None
 Memory: 512 GB (8 x 64 GB 2Rx4 PC5-5600B-R, running at 4800)
 Storage: 1 x 960 GB M.2 SSD SATA
 Other: CPU Cooling: Air

Software

OS: SUSE Linux Enterprise Server 15 SP5
 5.14.21-150500.53-default
 Compiler: C/C++: Version 2024.0.2 of Intel oneAPI DPC++/C++ Compiler for Linux;
 Fortran: Version 2024.0.2 of Intel Fortran Compiler for Linux;
 Parallel: Yes
 Firmware: Version 4.3.3a released Jan-2024
 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 set to prefer power save with minimal impact on performance



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Results Table

Benchmark	Base						Peak							
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s	52	89.2	662	89.7	658	<u>89.3</u>	<u>661</u>	52	89.3	661	89.0	663	<u>89.1</u>	<u>662</u>
607.cactuBSSN_s	52	<u>48.3</u>	<u>345</u>	48.4	344	48.1	346	52	<u>48.3</u>	<u>345</u>	48.4	344	48.1	346
619.lbm_s	52	32.2	163	32.2	163	<u>32.2</u>	<u>163</u>	52	32.2	163	32.2	163	<u>32.2</u>	<u>163</u>
621.wrf_s	52	65.9	201	<u>65.9</u>	<u>201</u>	66.0	200	52	65.9	201	<u>65.9</u>	<u>201</u>	66.0	200
627.cam4_s	52	50.8	174	50.6	175	<u>50.7</u>	<u>175</u>	52	50.5	176	<u>50.6</u>	<u>175</u>	50.8	174
628.pop2_s	52	<u>115</u>	<u>103</u>	115	103	116	102	52	<u>115</u>	<u>103</u>	115	103	116	102
638.imagick_s	52	23.1	624	22.9	629	<u>23.1</u>	<u>625</u>	52	23.1	624	22.9	629	<u>23.1</u>	<u>625</u>
644.nab_s	52	35.9	487	<u>35.9</u>	<u>487</u>	35.9	487	52	35.9	487	<u>35.9</u>	<u>487</u>	35.9	487
649.fotonik3d_s	52	<u>78.3</u>	<u>116</u>	78.3	116	78.2	117	52	<u>78.3</u>	<u>116</u>	78.3	116	78.2	117
654.roms_s	52	50.5	312	<u>50.5</u>	<u>312</u>	50.4	312	52	50.5	312	<u>50.5</u>	<u>312</u>	50.4	312

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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"
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 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
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.
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>



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Platform Notes

BIOS Settings:

Intel Hyper-Threading Technology set to Disabled
Sub NUMA Clustering set to Disabled
LLC Dead Line set to Disabled
ADDDC Sparing set to Disabled
Processor C6 Report set to Enabled
UPI Power Management 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 Fri Apr 5 01:48:56 2024

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 249 (249.16+suse.171.gdad0071f15)
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. 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 5.14.21-150500.53-default #1 SMP PREEMPT_DYNAMIC Wed May 10 07:56:26 UTC 2023 (b630043)
x86_64 x86_64 x86_64 GNU/Linux

2. w
01:48:56 up 3:13, 1 user, load average: 5.60, 5.16, 3.10
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
root ttyl - 22:36 3:11m 0.90s 0.11s -bash

3. Username
From environment variable \$USER: root

(Continued on next page)



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Platform Notes (Continued)

```

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) 2061840
   max locked memory      (kbytes, -l) 64
   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) 2061840
   virtual memory         (kbytes, -v) unlimited
   file locks             (-x) unlimited

```

```

-----
5. sysinfo process ancestry
   /usr/lib/systemd/systemd --switched-root --system --deserialize 30
   login -- root
   -bash
   -bash
   runcpu --define default-platform-flags -c ic2024.0.2-lin-sapphirerapids-speed-20231213.cfg --define cores=52
     --tune all -o all --define drop_caches fpspeed
   runcpu --define default-platform-flags --configfile ic2024.0.2-lin-sapphirerapids-speed-20231213.cfg
     --define cores=52 --tune all --output_format all --define drop_caches --nopower --runmode speed --tune
     base:peak --size refspeed fpspeed --nopreenv --note-preenv --logfile
     $SPEC/tmp/CPU2017.077/templogs/preenv.fpspeed.077.0.log --lognum 077.0 --from_runcpu 2
   specperl $SPEC/bin/sysinfo
   $SPEC = /home/cpu2017

```

```

-----
6. /proc/cpuinfo
   model name      : INTEL(R) XEON(R) PLATINUM 8571N
   vendor_id      : GenuineIntel
   cpu family     : 6
   model          : 207
   stepping       : 2
   microcode      : 0x21000200
   bugs           : spectre_v1 spectre_v2 spec_store_bypass swapgs eibrs_pbrsb
   cpu cores      : 52
   siblings       : 52
   1 physical ids (chips)
   52 processors (hardware threads)
   physical id 0: core ids 0-51
   physical id 0: apicids
   0,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32,34,36,38,40,42,44,46,48,50,52,54,56,58,60,62,64,66,68,70,72
   ,74,76,78,80,82,84,86,88,90,92,94,96,98,100,102
   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 2.37.4:
Architecture:      x86_64
CPU op-mode(s):    32-bit, 64-bit
Address sizes:      46 bits physical, 57 bits virtual

```

(Continued on next page)



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Platform Notes (Continued)

```

Byte Order:                Little Endian
CPU(s):                    52
On-line CPU(s) list:      0-51
Vendor ID:                 GenuineIntel
Model name:                INTEL(R) XEON(R) PLATINUM 8571N
CPU family:                6
Model:                     207
Thread(s) per core:       1
Core(s) per socket:       52
Socket(s):                 1
Stepping:                  2
CPU max MHz:               4000.0000
CPU min MHz:               800.0000
BogoMIPS:                  4800.00
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 invpcid_single
                           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 avx_vnni avx512_bf16 wbnoinvd dtherm ida arat pln pts hwp
                           hwp_act_window hwp_epp hwp_pkg_req hfi 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 avx512_fp16
                           amx_tile flush_l1d arch_capabilities
L1d cache:                 2.4 MiB (52 instances)
L1i cache:                 1.6 MiB (52 instances)
L2 cache:                  104 MiB (52 instances)
L3 cache:                  300 MiB (1 instance)
NUMA node(s):              1
NUMA node0 CPU(s):        0-51
Vulnerability Itlb multihit: Not affected
Vulnerability Lltf:        Not affected
Vulnerability Mds:         Not affected
Vulnerability Meltdown:    Not affected
Vulnerability Mmio stale data: Not affected
Vulnerability Retbleed:    Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1:  Mitigation; usercopy/swaps barriers and __user pointer sanitization
Vulnerability Spectre v2:  Mitigation; Enhanced IBRS, IBPB conditional, RSB filling, PBRSE-eIBRS SW
                           sequence
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      2.4M   12 Data          1       64      1           64
L1i   32K      1.6M    8 Instruction    1       64      1           64
L2    2M       104M   16 Unified       2      2048     1           64
L3   300M     300M   20 Unified       3    245760     1           64

```

8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.

(Continued on next page)



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Platform Notes (Continued)

```
available: 1 nodes (0)
node 0 cpus: 0-51
node 0 size: 515490 MB
node 0 free: 501298 MB
node distances:
node 0
0: 10
```

```
-----
9. /proc/meminfo
MemTotal: 527862664 kB
```

```
-----
10. who -r
run-level 3 Apr 4 22:35
```

```
-----
11. Systemd service manager version: systemd 249 (249.16+suse.171.gdad0071f15)
Default Target Status
multi-user degraded
```

```
-----
12. Failed units, from systemctl list-units --state=failed
UNIT LOAD ACTIVE SUB DESCRIPTION
* smartd.service loaded failed failed Self Monitoring and Reporting Technology (SMART) Daemon
```

```
-----
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 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
firewalld gpm grub2-once haveged haveged-switch-root 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-network-generator systemd-sysexec systemd-time-wait-sync systemd-timesyncd udisks2
vncserver@
indirect wickedd
```

```
-----
14. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-5.14.21-150500.53-default
root=UUID=1ae035da-2948-4dc2-9bb2-437ad0076efe
splash=silent
mitigations=auto
quiet
security=apparmor
```

```
-----
15. cpupower frequency-info
analyzing CPU 0:
current policy: frequency should be within 800 MHz and 4.00 GHz.
The governor "performance" may decide which speed to use
within this range.
boost state support:
Supported: yes
Active: yes
```

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Platform Notes (Continued)

```

-----
16. sysctl
kernel.numa_balancing          0
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                  1
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 SUSE Linux Enterprise Server 15 SP5

-----
20. Disk information
SPEC is set to: /home/cpu2017
Filesystem  Type  Size  Used Avail Use% Mounted on
/dev/sda2   btrfs 222G  26G 192G 12% /home

-----
21. /sys/devices/virtual/dmi/id
Vendor:      Cisco Systems Inc
Product:     UCSC-C240-M7SX
Serial:      WZP27100DJ4

-----
22. dmidecode
Additional information from dmidecode 3.4 follows.  WARNING: Use caution when you interpret this section.

```

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Platform Notes (Continued)

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:

8x 0xCE00 M321R8GA0PB0-CWMCH 64 GB 2 rank 5600, configured at 4800

23. BIOS

(This section combines info from /sys/devices and dmidecode.)

BIOS Vendor: Cisco Systems, Inc.
BIOS Version: C240M7.4.3.3a.0.0118241337
BIOS Date: 01/18/2024
BIOS Revision: 5.32

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 2024.0.2 Build 20231213
Copyright (C) 1985-2023 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 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 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 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.

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

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
Copyright (C) 1985-2023 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.0.2 Build 20231213
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Base Compiler Invocation

C benchmarks:

icx

(Continued on next page)



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Base Compiler Invocation (Continued)

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 -xsaphirerapids -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

```

Fortran benchmarks:

```

-w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xsaphirerapids -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 -xsaphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp

```

(Continued on next page)



SPEC CPU®2017 Floating Point Speed Result

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Cisco Systems

Cisco UCS C240 M7 (Intel Xeon Platinum 8571N, 2.40GHz)

SPECspeed®2017_fp_base = 261

SPECspeed®2017_fp_peak = 261

CPU2017 License: 9019

Test Sponsor: Cisco Systems

Tested by: Cisco Systems

Test Date: Apr-2024

Hardware Availability: Feb-2024

Software Availability: Dec-2023

Base Optimization Flags (Continued)

Benchmarks using both Fortran and C (continued):

```
-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 -xsapphirerapids -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
```

(Continued on next page)



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Hardware Availability: Feb-2024

Software Availability: Dec-2023

Peak Optimization Flags (Continued)

Fortran benchmarks:

```
603.bwaves_s: -w -m64 -Wl,-z,muldefs -DSPEC_OPENMP -xsapphirerapids
-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: -w -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -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
```

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-ic2024-official-linux64.html>

<http://www.spec.org/cpu2017/flags/Cisco-Platform-Settings-V1.0-EMR-revD.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/Intel-ic2024-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/Cisco-Platform-Settings-V1.0-EMR-revD.xml>

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