SPEC CPU®2017 Floating Point Speed Result

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Cisco Systems

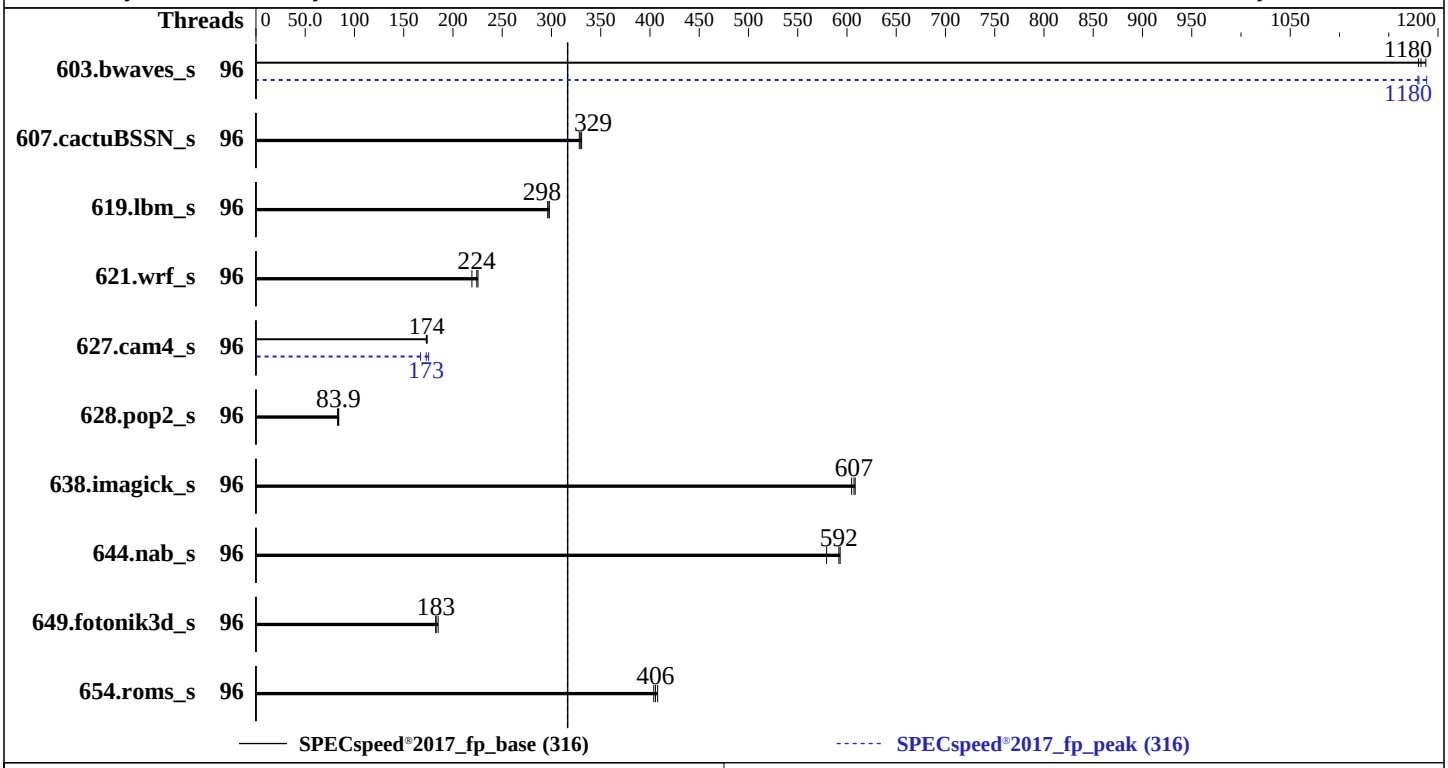
Cisco UCS X210c M8 (Intel Xeon 6520P 2.40 GHz processor)

SPECspeed®2017_fp_base = 316

SPECspeed®2017_fp_peak = 316

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

Test Date: Aug-2025
Hardware Availability: Feb-2025
Software Availability: Jun-2024



Hardware

CPU Name:	Intel Xeon 6520P
Max MHz:	4000
Nominal:	2400
Enabled:	48 cores, 2 chips, 2 threads/core
Orderable:	1,2 chips
Cache L1:	64 KB I + 48 KB D on chip per core
L2:	2 MB I+D on chip per core
L3:	144 MB I+D on chip per chip
Other:	None
Memory:	1 TB (16 x 64 GB 2Rx4 PC5-6400B-R)
Storage:	1 x 960 GB SSD
Other:	CPU Cooling: Air

Software

OS:	SUSE Linux Enterprise Server 15 SP6 6.4.0-150600.21-default
Compiler:	C/C++: Version 2024.1 of Intel oneAPI DPC++/C++ Compiler for Linux; Fortran: Version 2024.1 of Intel Fortran Compiler for Linux;
Parallel:	Yes
Firmware:	Version 6.0.1a released Jul-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 set to prefer performance at the cost of additional power usage

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s	96	**49.9**	**1180**	49.7	1190	50.0	1180	96	**50.0**	**1180**	50.0	1180	49.6	1190
607.cactuBSSN_s	96	**50.6**	**329**	50.8	328	50.4	331	96	**50.6**	**329**	50.8	328	50.4	331
619.lbm_s	96	**17.6**	**298**	17.6	298	17.7	296	96	**17.6**	**298**	17.6	298	17.7	296
621.wrf_s	96	60.3	219	**59.0**	**224**	58.7	225	96	60.3	219	**59.0**	**224**	58.7	225
627.cam4_s	96	51.2	173	51.0	174	**51.1**	**174**	96	53.0	167	**51.3**	**173**	50.6	175
628.pop2_s	96	143	82.8	**142**	**83.9**	141	84.0	96	143	82.8	**142**	**83.9**	141	84.0
638.imagick_s	96	23.9	605	**23.8**	**607**	23.7	608	96	23.9	605	**23.8**	**607**	23.7	608
644.nab_s	96	29.5	593	**29.5**	**592**	30.2	579	96	29.5	593	**29.5**	**592**	30.2	579
649.fotonik3d_s	96	**49.9**	**183**	49.3	185	50.0	182	96	**49.9**	**183**	49.3	185	50.0	182
654.roms_s	96	38.6	408	39.0	404	**38.8**	**406**	96	38.6	408	39.0	404	**38.8**	**406**

SPECspeed®2017_fp_base = 316

SPECspeed®2017_fp_peak = 316

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
```

Platform Notes

```
BIOS settings:
```

(Continued on next page)

Platform Notes (Continued)

```
Sub NUMA clustering set to Disabled
Hardware prefetcher set to Enabled
Adjacent cache line prefetcher 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 specpu Tue Aug 26 06:07:05 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 specpu 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
    06:07:05 up 4 min,  3 users,  load average: 0.17, 0.71, 0.41
   USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
   root     tty1     -                06:06    9.00s  1.35s  0.19s -bash

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

 ------------------------------------------------------------
 4. ulimit -a
   core file size          (blocks, -c) unlimited
```

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Platform Notes (Continued)

```
   data seg size           (kbytes, -d) unlimited
   scheduling priority             (-e) 0
   file size               (blocks, -f) unlimited
   pending signals                 (-i) 4123903
   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) 4123903
   virtual memory          (kbytes, -v) unlimited
   file locks                      (-x) unlimited

------------------------------------------------------------
5. sysinfo process ancestry
 /usr/lib/systemd/systemd --switched-root --system --deserialize=42
 login -- root
 -bash
 -bash
 runcpu --define default-platform-flags -c ic2024.1-lin-sapphirerapids-speed-20240308.cfg --define cores=96
   --tune all -o all --define drop_caches fpspeed
 runcpu --define default-platform-flags --configfile ic2024.1-lin-sapphirerapids-speed-20240308.cfg --define
   cores=96 --tune all --output_format all --define drop_caches --nopower --runmode speed --tune base:peak
   --size refspeed fpspeed --nopreenv --note-preenv --logfile
   $SPEC/tmp/CPU2017.115/templogs/preenv.fpspeed.115.0.log --lognum 115.0 --from_runcpu 2
 specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017

------------------------------------------------------------
6. /proc/cpuinfo
    model name      : Intel(R) Xeon(R) 6520P
    vendor_id       : GenuineIntel
    cpu family      : 6
    model           : 173
    stepping        : 1
    microcode       : 0x10003c2
    bugs            : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi
    cpu cores       : 24
    siblings        : 48
    2 physical ids (chips)
    96 processors (hardware threads)
    physical id 0: core ids 0-23
    physical id 1: core ids 0-23
    physical id 0: apicids 0-47
    physical id 1: apicids 128-175
  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):                               96
```

(Continued on next page)

Platform Notes (Continued)

```
   On-line CPU(s) list:                0-95
   Vendor ID:                          GenuineIntel
   BIOS Vendor ID:                     Intel(R) Corporation
   Model name:                         Intel(R) Xeon(R) 6520P
   BIOS Model name:                    Intel(R) Xeon(R) 6520P  CPU @ 2.4GHz
   BIOS CPU family:                    179
   CPU family:                         6
   Model:                              173
   Thread(s) per core:                 2
   Core(s) per socket:                 24
   Socket(s):                          2
   Stepping:                           1
   CPU(s) scaling MHz:                 20%
   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 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 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 ibt amx_bf16 avx512_fp16 amx_tile
                                       amx_int8 flush_l1d arch_capabilities
   L1d cache:                          2.3 MiB (48 instances)
   L1i cache:                          3 MiB (48 instances)
   L2 cache:                           96 MiB (48 instances)
   L3 cache:                           288 MiB (2 instances)
   NUMA node(s):                       2
   NUMA node0 CPU(s):                  0-23,48-71
   NUMA node1 CPU(s):                  24-47,72-95
   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
```

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Platform Notes (Continued)

```
     L1d       48K     2.3M   12 Data            1     64        1             64
     L1i       64K       3M   16 Instruction     1     64        1             64
     L2         2M      96M   16 Unified         2   2048        1             64
     L3       144M     288M   16 Unified         3 147456        1             64

------------------------------------------------------------
8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
  available: 2 nodes (0-1)
  node 0 cpus: 0-23,48-71
  node 0 size: 515307 MB
  node 0 free: 514258 MB
  node 1 cpus: 24-47,72-95
  node 1 size: 515694 MB
  node 1 free: 514679 MB
  node distances:
  node   0   1
    0:  10  21
    1:  21  10

------------------------------------------------------------
9. /proc/meminfo
   MemTotal:       1055745676 kB

------------------------------------------------------------
10. who -r
  run-level 3 Aug 26 06:02

------------------------------------------------------------
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
  * postfix.service loaded failed failed Postfix Mail Transport Agent

------------------------------------------------------------
13. Services, from systemctl list-unit-files
  STATE            UNIT FILES
  enabled          YaST2-Firstboot YaST2-Second-Stage apparmor auditd cron display-manager firewalld getty@
                   irqbalance issue-generator kbdsettings kdump kdump-early kdump-notify klog lvm2-monitor
                   nscd nvmefc-boot-connections nvmf-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 ebtables exchange-bmc-os-info 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=6a926507-8559-4f9f-ae76-604f2d756f69
  splash=silent
  mitigations=auto
```

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Platform Notes (Continued)

```
  quiet
  security=apparmor
  crashkernel=364M,high
  crashkernel=72M,low

------------------------------------------------------------
15. cpupower frequency-info
  analyzing CPU 76:
    current policy: frequency should be within 800 MHz and 4.00 GHz.
                    The governor "powersave" may decide which speed to use
                    within this range.
    boost state support:
      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                       1
  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

------------------------------------------------------------
```

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Platform Notes (Continued)

```
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/nvme0n1p2 btrfs  371G   29G  338G   8% /home

------------------------------------------------------------
22. /sys/devices/virtual/dmi/id
    Vendor:         Cisco Systems Inc
    Product:        UCSX-210C-M8
    Serial:         FCH28427289

------------------------------------------------------------
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:
    16x 0xCE00 M321R8GA0PB2-CCPKC 64 GB 2 rank 6400


------------------------------------------------------------
24. BIOS
(This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor:       Cisco Systems, Inc.
   BIOS Version:      X210M8.6.0.1a.3.0718251042
   BIOS Date:         07/18/2025
   BIOS Revision:     5.35
```

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 2024.1.0 Build 20240308
Copyright (C) 1985-2024 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 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 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 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
```

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Compiler Version Notes (Continued)

```
------------------------------------------------------------------------------------------------------------
==============================================================================================================
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 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2024.1.0 Build 20240308
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
icx

Fortran benchmarks:
ifx

Benchmarks using both Fortran and C:
ifx icx

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

Base Portability Flags

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

Base Optimization Flags

C benchmarks:
-w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -fiopenmp

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Base Optimization Flags (Continued)

C benchmarks (continued):
-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 -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

Benchmarks using both Fortran and C:
-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

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`

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-V1.2-GNR-revE.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-V1.2-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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