Cisco Systems
Cisco UCS C240 M6 (Intel Xeon Platinum 8360Y, 2.40GHz)

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base</th>
<th>430</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_fp_peak</td>
<td>Not Run</td>
</tr>
</tbody>
</table>

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

Test Date: Sep-2021
Hardware Availability: Apr-2021
Software Availability: Dec-2020

### Hardware

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Xeon Platinum 8360Y</td>
</tr>
<tr>
<td>Max MHz</td>
<td>3500</td>
</tr>
<tr>
<td>Nominal</td>
<td>2400</td>
</tr>
<tr>
<td>Enabled</td>
<td>72 cores, 2 chips, 2 threads/core</td>
</tr>
<tr>
<td>Orderable</td>
<td>1,2 Chips</td>
</tr>
<tr>
<td>Cache L1</td>
<td>32 KB I + 48 KB D on chip per core</td>
</tr>
<tr>
<td>L2:</td>
<td>1.25 MB I+D on chip per core</td>
</tr>
<tr>
<td>L3:</td>
<td>54 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other:</td>
<td>None</td>
</tr>
<tr>
<td>Memory:</td>
<td>2 TB (32 x 64 GB 2Rx4 PC4-3200AA-R)</td>
</tr>
<tr>
<td>Storage:</td>
<td>1 x 240 GB M.2 SSD SATA</td>
</tr>
<tr>
<td>Other:</td>
<td>None</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS:</td>
<td>SUSE Linux Enterprise Server 15 SP2</td>
</tr>
<tr>
<td>Compiler:</td>
<td>C/C++: Version 2021.1 of Intel oneAPI DPC++/C++ Compiler Build 2020112 for Linux; Fortran: Version 2021.1 of Intel Fortran Compiler Classic Build 20201112 for Linux</td>
</tr>
<tr>
<td>Parallel:</td>
<td>No</td>
</tr>
<tr>
<td>Firmware:</td>
<td>Version 4.2.1d released Jul-2021</td>
</tr>
<tr>
<td>File System:</td>
<td>btrfs</td>
</tr>
<tr>
<td>System State:</td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers:</td>
<td>64-bit</td>
</tr>
<tr>
<td>Peak Pointers:</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Other:</td>
<td>jemalloc memory allocator V5.0.1</td>
</tr>
<tr>
<td>Power Management:</td>
<td>BIOS and OS set to prefer performance at the cost of additional power usage</td>
</tr>
</tbody>
</table>

### SPEC CPU 2017 Floating Point Rate Result

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base = 430</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>503.bwaves_r</td>
<td>144</td>
<td>610</td>
</tr>
<tr>
<td>507.cactuBSSN_r</td>
<td>144</td>
<td>373</td>
</tr>
<tr>
<td>508.namd_r</td>
<td>144</td>
<td>207</td>
</tr>
<tr>
<td>510.parest_r</td>
<td>144</td>
<td>545</td>
</tr>
<tr>
<td>511.povray_r</td>
<td>144</td>
<td>269</td>
</tr>
<tr>
<td>519.lbm_r</td>
<td>144</td>
<td>342</td>
</tr>
<tr>
<td>521.wrf_r</td>
<td>144</td>
<td>516</td>
</tr>
<tr>
<td>526.blender_r</td>
<td>144</td>
<td>1270</td>
</tr>
<tr>
<td>527.cam4_r</td>
<td>144</td>
<td>838</td>
</tr>
<tr>
<td>538.imagick_r</td>
<td>144</td>
<td>229</td>
</tr>
<tr>
<td>544.nab_r</td>
<td>144</td>
<td>158</td>
</tr>
<tr>
<td>549.fotonik3d_r</td>
<td>144</td>
<td>509</td>
</tr>
<tr>
<td>554.roms_r</td>
<td>144</td>
<td>509</td>
</tr>
</tbody>
</table>

---

Page 1
# SPEC CPU®2017 Floating Point Rate Result

## Cisco Systems

Cisco UCS C240 M6 (Intel Xeon Platinum 8360Y, 2.40GHz)

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>9019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>Cisco Systems</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Cisco Systems</td>
</tr>
<tr>
<td>Test Date:</td>
<td>Sep-2021</td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>Apr-2021</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Dec-2020</td>
</tr>
</tbody>
</table>

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>503.bwaves_r</td>
<td>144</td>
<td>2019</td>
<td>715</td>
<td>2018</td>
<td>716</td>
<td>2018</td>
<td>716</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>507.cactuBSSN_r</td>
<td>144</td>
<td>610</td>
<td>299</td>
<td>300</td>
<td>608</td>
<td>300</td>
<td>608</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>508.namd_r</td>
<td>144</td>
<td>365</td>
<td>375</td>
<td>367</td>
<td>372</td>
<td>367</td>
<td>373</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>510.parest_r</td>
<td>144</td>
<td>1816</td>
<td>207</td>
<td>1814</td>
<td>208</td>
<td>1816</td>
<td>207</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>511.povray_r</td>
<td>144</td>
<td>612</td>
<td>549</td>
<td>618</td>
<td>544</td>
<td>617</td>
<td>545</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>519.lbm_r</td>
<td>144</td>
<td>565</td>
<td>269</td>
<td>564</td>
<td>269</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>521.wrf_r</td>
<td>144</td>
<td>943</td>
<td>342</td>
<td>948</td>
<td>340</td>
<td>934</td>
<td>345</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>526.blender_r</td>
<td>144</td>
<td>425</td>
<td>516</td>
<td>422</td>
<td>520</td>
<td>425</td>
<td>516</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>527.cam4_r</td>
<td>144</td>
<td>497</td>
<td>507</td>
<td>491</td>
<td>512</td>
<td>495</td>
<td>509</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>538.imagick_r</td>
<td>144</td>
<td>282</td>
<td>1270</td>
<td>282</td>
<td>1270</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>544.nab_r</td>
<td>144</td>
<td>289</td>
<td>837</td>
<td>287</td>
<td>843</td>
<td>289</td>
<td>838</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>549.fotonik3d_r</td>
<td>144</td>
<td>2453</td>
<td>229</td>
<td>2453</td>
<td>229</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>554.roms_r</td>
<td>144</td>
<td>1447</td>
<td>158</td>
<td>1445</td>
<td>158</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 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"
cpupower frequency-set -g performance run as root to set the scaling governor to performance.

### 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"
MALLOCONF = "retain:true"

### General Notes

Binaries compiled on a system with 1x Intel Core i9-7940X CPU + 64GB RAM memory using openSUSE Leap 15.2
Transparent Huge Pages enabled by default

(Continued on next page)
Cisco Systems
Cisco UCS C240 M6 (Intel Xeon Platinum 8360Y, 2.40GHz)

SPECraten®2017_fp_base = 430
SPECraten®2017_fp_peak = Not Run

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

General Notes (Continued)

Prior to runcpu invocation
Filesystem page cache synced and cleared with:
sync; echo 3 > /proc/sys/vm/drop_caches
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1)
is mitigated in the system as tested and documented.
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

Platform Notes

BIOS Settings:
Adjacent Cache Line Prefetcher set to Disabled
DCU Streamer Prefetch set to Disabled
UPI Link Enablement set to 1
UPI Power Management set to Enabled
Sub NUMA Clustering set to Enabled
LLC Dead Line set to Disabled
Memory Refresh Rate set to 1x Refresh
ADDDC Sparing set to Disabled
Patrol Scrub set to Disabled
Processor C6 Report set to Enabled

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d
running on install Fri Sep 24 20:38:51 2021

SUT (System Under Test) info as seen by some common utilities.
For more information on this section, see
https://www.spec.org/cpu2017/Docs/config.html#sysinfo

From /proc/cpuinfo

model name : Intel(R) Xeon(R) Platinum 8360Y CPU @ 2.40GHz
            2 "physical id"s (chips)
            144 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following
excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
cpu cores : 36
siblings : 72
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

(Continued on next page)
Platform Notes (Continued)

From lscpu from util-linux 2.33.1:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
Address sizes: 46 bits physical, 57 bits virtual
CPU(s): 144
On-line CPU(s) list: 0-143
Thread(s) per core: 2
Core(s) per socket: 36
Socket(s): 2
NUMA node(s): 4
Vendor ID: GenuineIntel
CPU family: 6
Model: 106
Model name: Intel(R) Xeon(R) Platinum 8360Y CPU @ 2.40GHz
Stepping: 6
CPU MHz: 2681.086
CPU max MHz: 3500.0000
CPU min MHz: 800.0000
BogoMIPS: 4800.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 1280K
L3 cache: 55296K
NUMA node0 CPU(s): 0-17, 72-89
NUMA node1 CPU(s): 18-35, 90-107
NUMA node2 CPU(s): 36-53, 108-125
NUMA node3 CPU(s): 54-71, 126-143
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
aperfmpref pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16
xtpre pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave
avxf16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 invpcid_single ssbd
mbe ibrs ibpb stibp ibrs enhanced tpr_shadow vmni flexpriority ept vpid ept_ad
fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erts invpcid rtm cqm rdt_a avx512f
avx512dq rdseed adx smap avx512ifma clflushopt clwb intel_pt avx512cd sha ni
avx512bw avx512vl xsaveopt xsaves xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbb_total
cqm_mbb_local wbnoinvd dtherm ida arat pni pts hwp hwp_act_window hwp_epp
hwp_kpg_req avx512v bmi umip pku ospke avx512_vbmi2 gfn vaes vpclmulqdq avx512_vmni
avx512_bitalg tme avx512_vpocntdq 1a57 rdpid md_clear pconfig flush_l1d
arch_capabilities

(Continued on next page)
Platform Notes (Continued)

/proc/cpuinfo cache data
  cache size : 55296 KB

From numactl --hardware
WARNING: a numactl 'node' might or might not correspond to a physical chip.
  available: 4 nodes (0-3)
  node 0 cpus: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 22 28 30 31 32 33 34 35 90 91 92 93 94 95 96
28 82 83 84 85 86 87 88 89
  node 0 size: 515646 MB
  node 0 free: 515174 MB
  node 1 cpus: 0 1 18 19 20 21 22 23 24 25 26 27 28 30 31 32 33 34 35 90 91 92 93 94 95 96
  node 1 size: 515646 MB
  node 1 free: 515174 MB
  node 2 cpus: 36 37 38 39 40 41 42 44 45 46 47 48 49 50 51 52 53 108 109 110 111 112
  node 2 size: 515646 MB
  node 2 free: 515174 MB
  node 3 cpus: 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143
  node 3 size: 515646 MB
  node 3 free: 515174 MB
  node distances:
  node 0 1 2 3
  0:  10  11  20  20
  1:  11  10  20  20
  2:  20  20  10  11
  3:  20  20  11  10

From /proc/meminfo
  MemTotal:       2113438648 kB
  HugePages_Total:       0
  Hugepagesize:       2048 kB

/sys/devices/system/cpu/cpu*/cpufreq/scaling_governor has performance

From /etc/*release* /etc/*version*
  os-release:
    NAME="SLES"
    VERSION="15-SP2"
    VERSION_ID="15.2"
    PRETTY_NAME="SUSE Linux Enterprise Server 15 SP2"
    ID="sles"
    ID_LIKE="suse"
    ANSI_COLOR="0;32"

(Continued on next page)
Cisco Systems
Cisco UCS C240 M6 (Intel Xeon Platinum 8360Y, 2.40GHz)

SPECrate®2017_fp_base = 430
SPECrate®2017_fp_peak = Not Run

Platform Notes (Continued)

CPE_NAME="cpe:/o:suse:sles:15:sp2"

uname -a:
    Linux install 5.3.18-22-default #1 SMP Wed Jun 3 12:16:43 UTC 2020 (720aeba) x86_64
    x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-12207 (iTLB Multihit): Not affected
CVE-2018-3620 (L1 Terminal Fault): Not affected
Microarchitectural Data Sampling: Not affected
CVE-2017-5754 (Meltdown): Not affected
CVE-2018-3639 (Speculative Store Bypass): Mitigation: Speculative Store Bypass disabled via prctl and seccomp
CVE-2017-5753 (Spectre variant 1): Mitigation: usercopy/swapgs barriers and __user pointer sanitation
CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 3 Sep 24 20:36
SPEC is set to: /home/cpu2017
    Filesystem Type Size Used Avail Use% Mounted on
    /dev/sda2 btrfs 222G 37G 184G 17% /home

From /sys/devices/virtual/dmi/id
    Vendor: Cisco Systems Inc
    Product: UCSC-C240-M6S
    Serial: WZP24460JDZ

Additional information from dmidecode 3.2 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 0xCE00 M393A8G40AB2-CWE 64 GB 2 rank 3200

BIOS:
    BIOS Vendor: Cisco Systems, Inc.
    BIOS Version: C240M6.4.2.1d.0.0730210924
    BIOS Date: 07/30/2021
    BIOS Revision: 5.22

(Continued on next page)
Cisco Systems
Cisco UCS C240 M6 (Intel Xeon Platinum 8360Y, 2.40GHz)

SPECrater®2017_fp_base = 430
SPECrater®2017_fp_peak = Not Run

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

Test Date: Sep-2021
Hardware Availability: Apr-2021
Software Availability: Dec-2020

Platform Notes (Continued)
(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
| C                 | 519.lbm_r(base) 538.imagick_r(base) 544.nab_r(base) |
-----------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,  
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.             
-----------------------------------------------------------------------------

==============================================================================
| C++                | 508.namd_r(base) 510.parest_r(base) |
-----------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,  
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.             
-----------------------------------------------------------------------------

==============================================================================
| C++, C             | 511.povray_r(base) 526.blender_r(base) |
-----------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,  
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.             
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,  
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.             
-----------------------------------------------------------------------------

==============================================================================
| C++, C, Fortran    | 507.cactuBSSN_r(base) |
-----------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,  
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.             
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,  
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.             
Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on  
Intel(R) 64, Version 2021.1 Build 2020112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.             
-----------------------------------------------------------------------------

(Continued on next page)
Cisco Systems
Cisco UCS C240 M6 (Intel Xeon Platinum 8360Y, 2.40GHz)

SPECraten2017_fp_base = 430
SPECraten2017_fp_peak = Not Run

Compiler Version Notes (Continued)

<table>
<thead>
<tr>
<th>Fortran</th>
<th>503.bwaves_r(base) 549.fotonik3d_r(base) 554.roms_r(base)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000 Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fortran, C</th>
<th>521.wrf_r(base) 527.cam4_r(base)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000 Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
<td></td>
</tr>
</tbody>
</table>

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
ifort icx

Benchmarks using both C and C++:
icpx icx

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

Base Portability Flags

503.bwaves_r: -DSPEC_LP64
507.cactuBSSN_r: -DSPEC_LP64
508.namd_r: -DSPEC_LP64

(Continued on next page)
Cisco Systems
Cisco UCS C240 M6 (Intel Xeon Platinum 8360Y, 2.40GHz)

SPECrate®2017_fp_base = 430
SPECrate®2017_fp_peak = Not Run

CPU2017 License: 9019
Test Sponsor: Cisco Systems
Test Date: Sep-2021
Tested by: Cisco Systems
Hardware Availability: Apr-2021
Software Availability: Dec-2020

Base Portability Flags (Continued)

510.parest_r: -DSPEC_LP64
511.povray_r: -DSPEC_LP64
519.ibm_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
549.fotonik3d_r: -DSPEC_LP64
554.roms_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

C++ benchmarks:
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

Fortran benchmarks:
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ipo -no-prec-div
-qopt-prefetch -ffinite-math-only
-qopt-multiple-gather-scatter-by-shuffles -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-mbranches-within-32B-boundaries -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

Benchmarks using both Fortran and C:
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -O3 -ipo
-no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-multiple-gather-scatter-by-shuffles
-mbranches-within-32B-boundaries -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib

Benchmarks using both C and C++:
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4

(Continued on next page)
Cisco Systems
Cisco UCS C240 M6 (Intel Xeon Platinum 8360Y, 2.40GHz)  

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base =</th>
<th>430</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_fp_peak =</td>
<td>Not Run</td>
</tr>
</tbody>
</table>

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

**Test Date:** Sep-2021  
**Hardware Availability:** Apr-2021  
**Software Availability:** Dec-2020

### Base Optimization Flags (Continued)

Benchmarks using both C and C++ (continued):
- mbranches-within-32B-boundaries -ljemalloc  
- L/usr/local/jemalloc64-5.0.1/lib

Benchmarks using Fortran, C, and C++:
- -w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math  
- -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -O3  
- -no-prec-div -qopt-prefetch -ffinite-math-only  
- -qopt-multiple-gather-scatter-by-shuffles  
- -mbranches-within-32B-boundaries -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

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

---

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.

Tested with SPEC CPU®2017 v1.1.8 on 2021-09-24 20:38:51-0400.
Report generated on 2021-10-25 17:06:38 by CPU2017 PDF formatter v6442.
Originally published on 2021-10-25.