



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M5 (Intel Xeon Silver 4114, 2.20 GHz)

SPECrate®2017\_fp\_base = 105

SPECrate®2017\_fp\_peak = 107

CPU2017 License: 9019

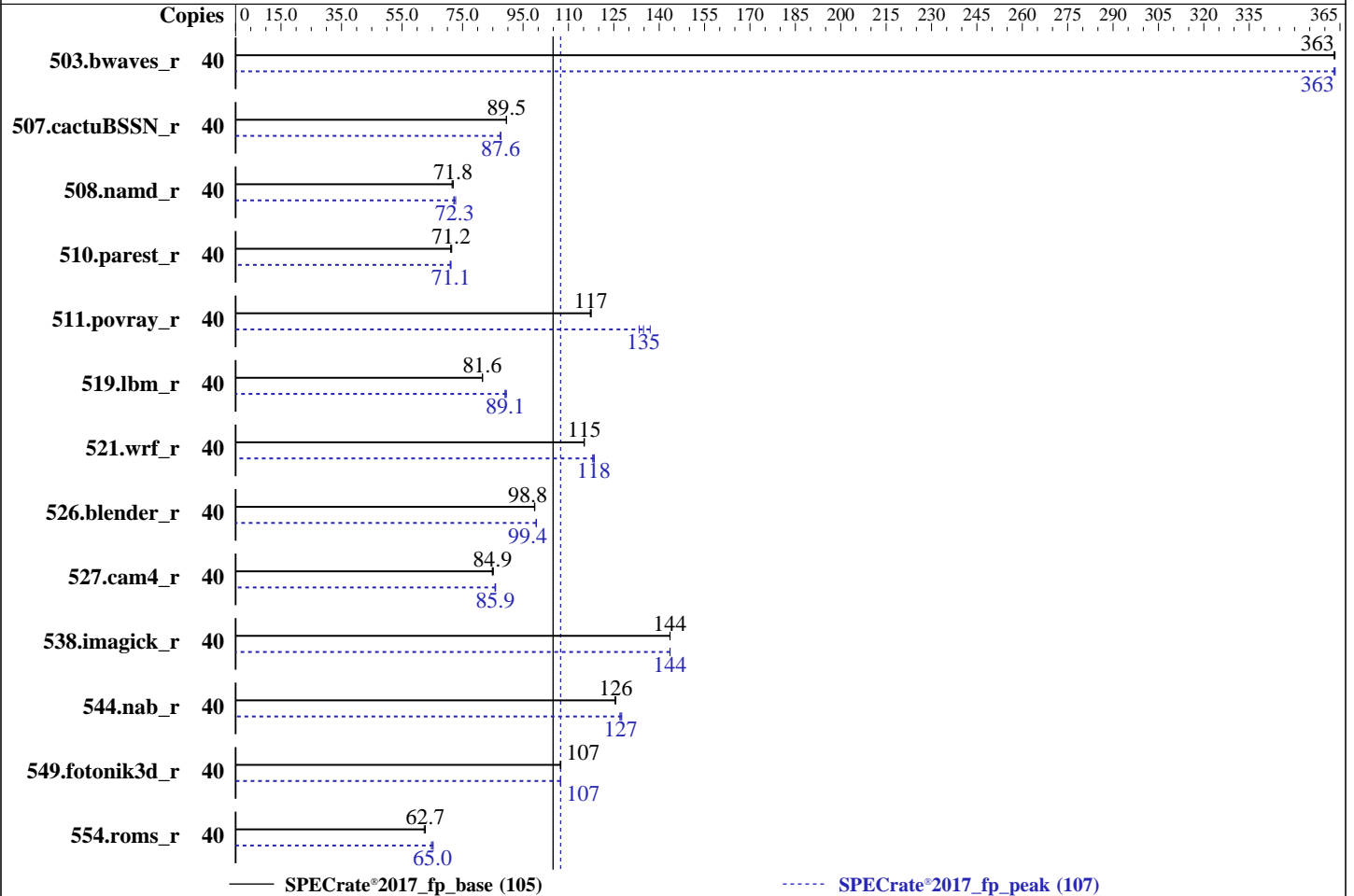
Test Sponsor: Cisco Systems

Tested by: Cisco Systems

Test Date: Dec-2017

Hardware Availability: Aug-2017

Software Availability: Sep-2017



### Hardware

CPU Name: Intel Xeon Silver 4114  
 Max MHz: 3000  
 Nominal: 2200  
 Enabled: 20 cores, 2 chips, 2 threads/core  
 Orderable: 1,2 Chips  
 Cache L1: 32 KB I + 32 KB D on chip per core  
 L2: 1 MB I+D on chip per core  
 L3: 13.75 MB I+D on chip per chip  
 Other: None  
 Memory: 384 GB (24 x 16 GB 2Rx4 PC4-2666V-R, running at 2400)  
 Storage: 1 x 600 GB SAS HDD, 10K RPM  
 Other: None

### Software

OS: SUSE Linux Enterprise Server 12 SP2 (x86\_64) 4.4.21-69-default  
 Compiler: C/C++: Version 18.0.0.128 of Intel C/C++ Compiler for Linux;  
 Fortran: Version 18.0.0.128 of Intel Fortran Compiler for Linux  
 Parallel: No  
 Firmware: Version 3.1.1d released Jun-2017  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 64-bit  
 Other: None  
 Power Management: --



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M5 (Intel Xeon Silver 4114, 2.20 GHz)

SPECrate®2017\_fp\_base = 105

SPECrate®2017\_fp\_peak = 107

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

**Test Date:** Dec-2017  
**Hardware Availability:** Aug-2017  
**Software Availability:** Sep-2017

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	40	<b>1105</b>	<b>363</b>	1104	363	1105	363	40	1105	363	<b>1104</b>	<b>363</b>	1104	363
507.cactuBSSN_r	40	566	89.5	566	89.5	<b>566</b>	<b>89.5</b>	40	578	87.5	<b>578</b>	<b>87.6</b>	578	87.6
508.namd_r	40	528	71.9	531	71.5	<b>529</b>	<b>71.8</b>	40	522	72.7	527	72.1	<b>525</b>	<b>72.3</b>
510.parest_r	40	1465	71.4	1472	71.1	<b>1469</b>	<b>71.2</b>	40	1470	71.2	<b>1472</b>	<b>71.1</b>	1475	70.9
511.povray_r	40	795	118	<b>796</b>	<b>117</b>	797	117	40	<b>693</b>	<b>135</b>	682	137	700	133
519.lbm_r	40	<b>517</b>	<b>81.6</b>	517	81.5	516	81.6	40	<b>473</b>	<b>89.1</b>	473	89.1	471	89.5
521.wrf_r	40	778	115	<b>777</b>	<b>115</b>	777	115	40	<b>757</b>	<b>118</b>	759	118	756	119
526.blender_r	40	617	98.8	616	98.9	<b>616</b>	<b>98.8</b>	40	<b>613</b>	<b>99.4</b>	613	99.3	613	99.4
527.cam4_r	40	821	85.2	<b>824</b>	<b>84.9</b>	824	84.9	40	816	85.7	814	85.9	<b>815</b>	<b>85.9</b>
538.imagick_r	40	693	144	693	144	<b>693</b>	<b>144</b>	40	<b>693</b>	<b>144</b>	693	144	693	144
544.nab_r	40	537	125	<b>536</b>	<b>126</b>	536	126	40	528	128	<b>529</b>	<b>127</b>	530	127
549.fotonik3d_r	40	1452	107	1450	108	<b>1451</b>	<b>107</b>	40	1452	107	<b>1451</b>	<b>107</b>	1451	107
554.roms_r	40	1020	62.3	1014	62.7	<b>1014</b>	<b>62.7</b>	40	<b>977</b>	<b>65.0</b>	982	64.7	973	65.3

SPECrate®2017\_fp\_base = **105**

SPECrate®2017\_fp\_peak = **107**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset 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"

## General Notes

Environment variables set by runcpu before the start of the run:

LD\_LIBRARY\_PATH = "/home/cpu2017/lib/ia32:/home/cpu2017/lib/intel64:/home/cpu2017/je5.0.1-32:/home/cpu2017/je5.0.1-64"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM

memory using Redhat Enterprise Linux 7.4

Transparent Huge Pages enabled by default

Prior to runcpu invocation

Filesystem page cache synced and cleared with:

```
sync; echo 3> /proc/sys/vm/drop_caches
```



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M5 (Intel Xeon Silver 4114, 2.20 GHz)

SPECrate®2017\_fp\_base = 105

SPECrate®2017\_fp\_peak = 107

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

**Test Date:** Dec-2017  
**Hardware Availability:** Aug-2017  
**Software Availability:** Sep-2017

### Platform Notes

#### BIOS Settings:

Intel HyperThreading Technology set to Enabled  
CPU performance set to Enterprise  
Power Performance Tuning set to OS  
SNC set to Enabled  
IMC Interleaving set to 1-way Interleave  
Patrol Scrub set to Disabled  
Sysinfo program /home/cpu2017/bin/sysinfo  
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f  
running on linux-79ix Wed Dec 6 22:54:31 2017

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) Silver 4114 CPU @ 2.20GHz
 2 "physical id"s (chips)
 40 "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      : 10
siblings       : 20
physical 0:    cores 0 1 2 3 4 8 9 10 11 12
physical 1:    cores 0 1 2 3 4 8 9 10 11 12
```

#### From lscpu:

```
Architecture:    x86_64
CPU op-mode(s):  32-bit, 64-bit
Byte Order:      Little Endian
CPU(s):          40
On-line CPU(s) list:  0-39
Thread(s) per core:  2
Core(s) per socket:  10
Socket(s):       2
NUMA node(s):    2
Vendor ID:       GenuineIntel
CPU family:      6
Model:           85
Model name:      Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz
Stepping:        4
CPU MHz:         2143.213
CPU max MHz:     3000.0000
CPU min MHz:     800.0000
BogoMIPS:        4389.68
Virtualization:  VT-x
L1d cache:       32K
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M5 (Intel Xeon Silver 4114, 2.20 GHz)

SPECrate®2017\_fp\_base = 105

SPECrate®2017\_fp\_peak = 107

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Dec-2017

**Hardware Availability:** Aug-2017

**Software Availability:** Sep-2017

### Platform Notes (Continued)

```

L1i cache:          32K
L2 cache:           1024K
L3 cache:           14080K
NUMA node0 CPU(s): 0-9,20-29
NUMA node1 CPU(s): 10-19,30-39
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
aperfmpperf eagerfpu 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 ida arat epb pln pts dtherm hwp
hwp_act_window hwp_epp hwp_pkg_req intel_pt tpr_shadow vnmi flexpriority ept vpid
fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx avx512f
avx512dq rdseed adx smap clflushopt clwb avx512cd avx512bw avx512vl xsaveopt xsavec
xgetbv1 cqm_llc cqm_occup_llc

```

```

/proc/cpuinfo cache data
cache size : 14080 KB

```

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a physical chip.

```

available: 2 nodes (0-1)
node 0 cpus: 0 1 2 3 4 5 6 7 8 9 20 21 22 23 24 25 26 27 28 29
node 0 size: 192019 MB
node 0 free: 191236 MB
node 1 cpus: 10 11 12 13 14 15 16 17 18 19 30 31 32 33 34 35 36 37 38 39
node 1 size: 193384 MB
node 1 free: 192763 MB
node distances:
node    0    1
 0:   10   21
 1:   21   10

```

```

From /proc/meminfo
MemTotal:          394653832 kB
HugePages_Total:      0
Hugepagesize:       2048 kB

```

From /etc/\*release\* /etc/\*version\*

```

SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 2
# This file is deprecated and will be removed in a future service pack or release.
# Please check /etc/os-release for details about this release.
os-release:
NAME="SLES"

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M5 (Intel Xeon Silver 4114, 2.20 GHz)

SPECrate®2017\_fp\_base = 105

SPECrate®2017\_fp\_peak = 107

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

**Test Date:** Dec-2017  
**Hardware Availability:** Aug-2017  
**Software Availability:** Sep-2017

### Platform Notes (Continued)

```
VERSION="12-SP2"
VERSION_ID="12.2"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp2"
```

```
uname -a:
Linux linux-79ix 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016 (9464f67)
x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Dec 5 18:47
```

```
SPEC is set to: /home/cpu2017
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdb7       xfs   416G  116G  300G  28% /home
```

Additional information from dmidecode 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.

```
BIOS Cisco Systems, Inc. C220M5.3.1.1d.0.0615170645 06/15/2017
Memory:
24x 0xCE00 M393A2G40EB2-CTD 16 GB 2 rank 2666, configured at 2400
```

(End of data from sysinfo program)

### Compiler Version Notes

```
=====
C          | 519.lbm_r(base, peak) 538.imagick_r(base, peak)
          | 544.nab_r(base, peak)
-----

icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
-----

=====
C++       | 508.namd_r(base, peak) 510.parest_r(base, peak)
-----

icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
-----

=====
C++, C    | 511.povray_r(base, peak) 526.blender_r(base, peak)
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M5 (Intel Xeon Silver 4114, 2.20 GHz)

SPECrate®2017\_fp\_base = 105

SPECrate®2017\_fp\_peak = 107

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

**Test Date:** Dec-2017  
**Hardware Availability:** Aug-2017  
**Software Availability:** Sep-2017

### Compiler Version Notes (Continued)

-----  
icpc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.  
icc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.  
-----

=====  
C++, C, Fortran | 507.cactuBSSN\_r(base, peak)  
-----

icpc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.  
icc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.  
ifort (IFORT) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.  
-----

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

ifort (IFORT) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.  
-----

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

ifort (IFORT) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.  
icc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.  
-----

### Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

Fortran benchmarks:  
ifort

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M5 (Intel Xeon Silver 4114, 2.20 GHz)

SPECrate®2017\_fp\_base = 105

SPECrate®2017\_fp\_peak = 107

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Dec-2017

**Hardware Availability:** Aug-2017

**Software Availability:** Sep-2017

## Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C:

```
ifort icc
```

Benchmarks using both C and C++:

```
icpc icc
```

Benchmarks using Fortran, C, and C++:

```
icpc icc ifort
```

## Base Portability Flags

```
503.bwaves_r: -DSPEC_LP64
507.cactuBSSN_r: -DSPEC_LP64
508.namd_r: -DSPEC_LP64
510.parest_r: -DSPEC_LP64
511.povray_r: -DSPEC_LP64
519.lbm_r: -DSPEC_LP64
521.wrf_r: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
526.blender_r: -DSPEC_LP64 -DSPEC_LINUX -funsigned-char
527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG
538.imagick_r: -DSPEC_LP64
544.nab_r: -DSPEC_LP64
549.fotonik3d_r: -DSPEC_LP64
554.roms_r: -DSPEC_LP64
```

## Base Optimization Flags

C benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3
```

C++ benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3
```

Fortran benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte
```

Benchmarks using both Fortran and C:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

**Cisco Systems**

Cisco UCS C220 M5 (Intel Xeon Silver 4114,  
2.20 GHz)

SPECrate®2017\_fp\_base = 105

SPECrate®2017\_fp\_peak = 107

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Dec-2017

**Hardware Availability:** Aug-2017

**Software Availability:** Sep-2017

## Base Optimization Flags (Continued)

Benchmarks using both C and C++:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3
```

Benchmarks using Fortran, C, and C++:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte
```

## Base Other Flags

C benchmarks:

```
-m64 -std=c11
```

C++ benchmarks:

```
-m64
```

Fortran benchmarks:

```
-m64
```

Benchmarks using both Fortran and C:

```
-m64 -std=c11
```

Benchmarks using both C and C++:

```
-m64 -std=c11
```

Benchmarks using Fortran, C, and C++:

```
-m64 -std=c11
```

## Peak Compiler Invocation

C benchmarks:

```
icc
```

C++ benchmarks:

```
icpc
```

Fortran benchmarks:

```
ifort
```

(Continued on next page)





# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M5 (Intel Xeon Silver 4114,  
2.20 GHz)

SPECrate®2017\_fp\_base = 105

SPECrate®2017\_fp\_peak = 107

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Dec-2017

**Hardware Availability:** Aug-2017

**Software Availability:** Sep-2017

## Peak Compiler Invocation (Continued)

Benchmarks using both Fortran and C:

ifort icc

Benchmarks using both C and C++:

icpc icc

Benchmarks using Fortran, C, and C++:

icpc icc ifort

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

519.lbm\_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3

538.imagick\_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=3

544.nab\_r: Same as 519.lbm\_r

C++ benchmarks:

-prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3

Fortran benchmarks:

503.bwaves\_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=3  
-nostandard-realloc-lhs -align array32byte

549.fotonik3d\_r: Same as 503.bwaves\_r

554.roms\_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M5 (Intel Xeon Silver 4114, 2.20 GHz)

SPECrate®2017\_fp\_base = 105

SPECrate®2017\_fp\_peak = 107

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Dec-2017

**Hardware Availability:** Aug-2017

**Software Availability:** Sep-2017

## Peak Optimization Flags (Continued)

554.roms\_r (continued):

-align array32byte

Benchmarks using both Fortran and C:

-prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte

Benchmarks using both C and C++:

-prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3

Benchmarks using Fortran, C, and C++:

-prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte

## Peak Other Flags

C benchmarks:

-m64 -std=c11

C++ benchmarks:

-m64

Fortran benchmarks:

-m64

Benchmarks using both Fortran and C:

-m64 -std=c11

Benchmarks using both C and C++:

-m64 -std=c11

Benchmarks using Fortran, C, and C++:

-m64 -std=c11

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.html>

<http://www.spec.org/cpu2017/flags/Cisco-Platform-Settings-V1.2-revH.html>



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Cisco Systems

Cisco UCS C220 M5 (Intel Xeon Silver 4114,  
2.20 GHz)

SPECrate®2017\_fp\_base = 105

SPECrate®2017\_fp\_peak = 107

**CPU2017 License:** 9019

**Test Sponsor:** Cisco Systems

**Tested by:** Cisco Systems

**Test Date:** Dec-2017

**Hardware Availability:** Aug-2017

**Software Availability:** Sep-2017

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

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/Cisco-Platform-Settings-V1.2-revH.xml>

SPEC CPU and SPECrate are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester. For other inquiries, please contact [info@spec.org](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.0.2 on 2017-12-07 01:54:30-0500.

Report generated on 2020-06-25 15:50:50 by CPU2017 PDF formatter v6255.

Originally published on 2017-12-26.