



SPEC® CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C240 M5 (Intel Xeon Platinum 8180M, 2.50GHz)

SPECfp®2006 = **155**

SPECfp_base2006 = **149**

CPU2006 license: 9019

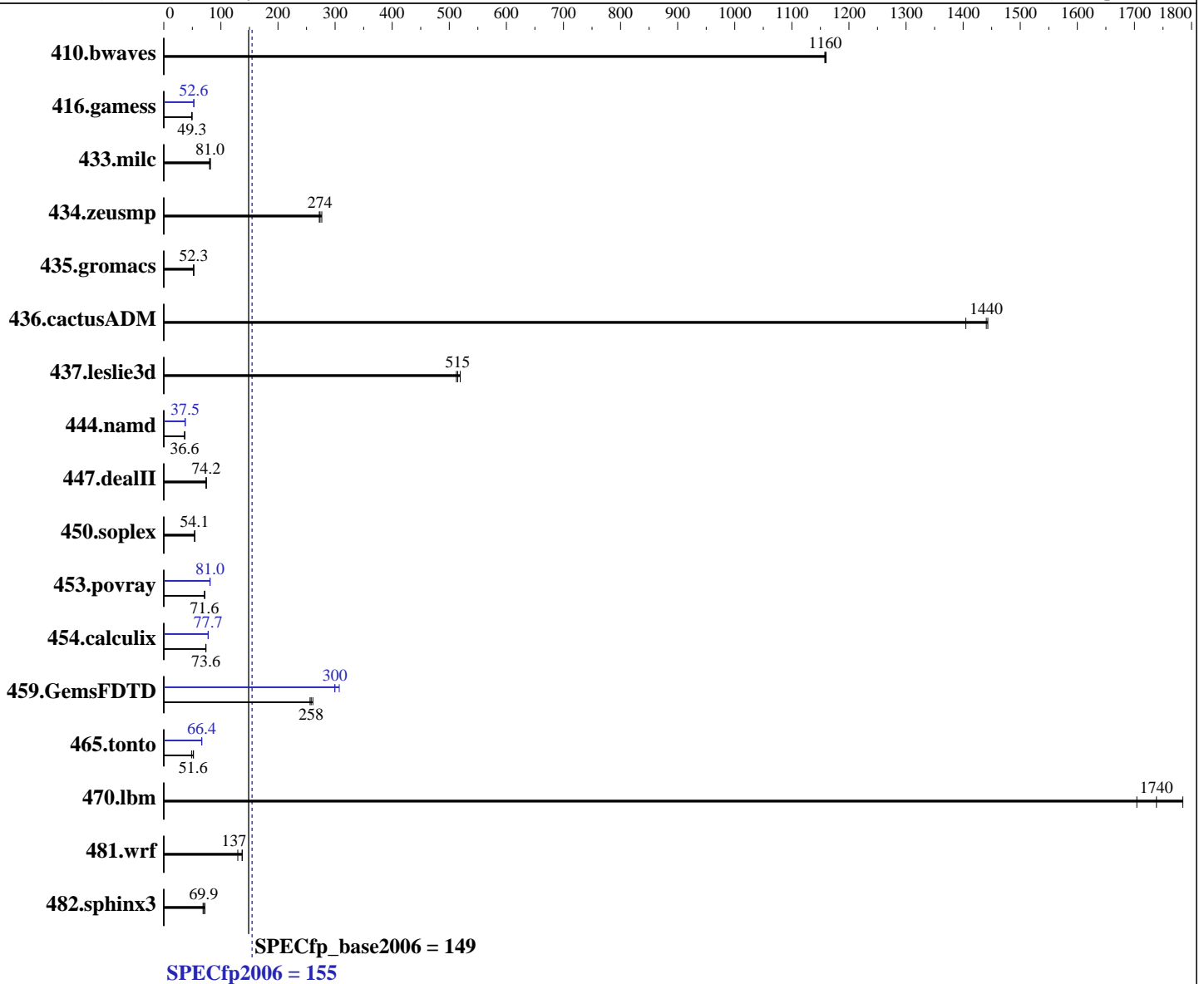
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Sep-2017

Hardware Availability: Aug-2017

Software Availability: Apr-2017



Hardware

CPU Name: Intel Xeon Platinum 8180M
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz
 CPU MHz: 2500
 FPU: Integrated
 CPU(s) enabled: 56 cores, 2 chips, 28 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 1 MB I+D on chip per core

Continued on next page

Software

Operating System: SUSE Linux Enterprise Server 12 SP2 (x86_64) 4.4.21-69-default
 Compiler: C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux;
 Fortran: Version 17.0.3.191 of Intel Fortran Compiler for Linux
 Auto Parallel: Yes
 File System: xfs
 System State: Run level 3 (multi-user)

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C240 M5 (Intel Xeon Platinum 8180M, 2.50GHz)

SPECfp2006 = **155**

SPECfp_base2006 = **149**

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Sep-2017

Hardware Availability: Aug-2017

Software Availability: Apr-2017

L3 Cache: 38.5 MB I+D on chip per chip
Other Cache: None
Memory: 384 GB (24 x 16 GB 2Rx4 PC4-2666V-R)
Disk Subsystem: 1 x 240 GB M.2 SATA SSD
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	11.7	1160	<u>11.7</u>	<u>1160</u>	11.7	1160	11.7	1160	<u>11.7</u>	<u>1160</u>	11.7	1160
416.gamess	397	49.3	398	49.3	<u>397</u>	<u>49.3</u>	372	52.6	<u>372</u>	<u>52.6</u>	372	52.6
433.milc	112	81.7	115	80.1	<u>113</u>	<u>81.0</u>	112	81.7	115	80.1	<u>113</u>	<u>81.0</u>
434.zeusmp	33.4	272	<u>33.3</u>	<u>274</u>	32.9	277	33.4	272	<u>33.3</u>	<u>274</u>	32.9	277
435.gromacs	136	52.6	<u>137</u>	<u>52.3</u>	137	52.2	136	52.6	<u>137</u>	<u>52.3</u>	137	52.2
436.cactusADM	8.51	1400	8.28	1440	<u>8.30</u>	<u>1440</u>	8.51	1400	8.28	1440	<u>8.30</u>	<u>1440</u>
437.leslie3d	18.1	519	<u>18.3</u>	<u>515</u>	18.3	512	18.1	519	<u>18.3</u>	<u>515</u>	18.3	512
444.namd	<u>219</u>	<u>36.6</u>	219	36.6	219	36.6	<u>214</u>	<u>37.5</u>	214	37.4	214	37.5
447.dealII	154	74.4	154	74.2	<u>154</u>	<u>74.2</u>	154	74.4	154	74.2	<u>154</u>	<u>74.2</u>
450.soplex	154	54.2	<u>154</u>	<u>54.1</u>	154	54.1	154	54.2	<u>154</u>	<u>54.1</u>	154	54.1
453.povray	74.5	71.4	<u>74.3</u>	<u>71.6</u>	74.3	71.6	65.9	80.8	<u>65.7</u>	<u>81.0</u>	65.6	81.2
454.calculix	112	74.0	112	73.5	<u>112</u>	<u>73.6</u>	<u>106</u>	<u>77.7</u>	106	77.6	106	78.0
459.GemsFDTD	41.4	256	40.6	261	<u>41.1</u>	<u>258</u>	35.4	299	<u>35.4</u>	<u>300</u>	34.5	307
465.tonto	<u>191</u>	<u>51.6</u>	202	48.6	189	52.0	148	66.5	148	66.4	<u>148</u>	<u>66.4</u>
470.lbm	<u>7.90</u>	<u>1740</u>	7.70	1780	8.06	1700	<u>7.90</u>	<u>1740</u>	7.70	1780	8.06	1700
481.wrf	81.3	137	86.2	130	<u>81.4</u>	<u>137</u>	81.3	137	86.2	130	<u>81.4</u>	<u>137</u>
482.sphinx3	284	68.7	<u>279</u>	<u>69.9</u>	271	72.0	284	68.7	<u>279</u>	<u>69.9</u>	271	72.0

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"

Platform Notes

BIOS Settings:
Intel HyperThreading Technology set to Disabled
CPU performance set to Enterprise
Power Performance Tuning set to OS
SNC set to Disabled
IMC Interleaving set to Auto
Patrol Scrub set to Disabled
Sysinfo program /home/cpu2006-1.2/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-omrt Sat Sep 9 13:33:55 2017

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C240 M5 (Intel Xeon Platinum 8180M, 2.50GHz)

SPECfp2006 = 155

SPECfp_base2006 = 149

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Sep-2017

Hardware Availability: Aug-2017

Software Availability: Apr-2017

Platform Notes (Continued)

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see: <http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

From /proc/cpuinfo

```
model name      : Intel(R) Xeon(R) Platinum 8180M CPU @ 2.50GHz
 2 "physical id"s (chips)
 56 "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      : 28
siblings       : 28
physical 0:    cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
                25 26 27 28 29 30
physical 1:    cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
                25 26 27 28 29 30
cache size     : 39424 KB
```

From /proc/meminfo

```
MemTotal:      394864268 kB
HugePages_Total: 0
Hugepagesize:  2048 kB
```

/usr/bin/lsb_release -d

```
SUSE Linux Enterprise Server 12 SP2
```

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"
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-omrt 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 Sep 9 13:11

SPEC is set to: /home/cpu2006-1.2

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C240 M5 (Intel Xeon Platinum 8180M, 2.50GHz)

SPECfp2006 = 155

SPECfp_base2006 = 149

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Sep-2017

Hardware Availability: Aug-2017

Software Availability: Apr-2017

Platform Notes (Continued)

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda3	xfs	182G	19G	163G	11%	/home

Additional information from dmidecode:

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. C240M5.3.1.1d.0.0615170707 06/15/2017

Memory:

24x 0xCE00 M393A2G40EB2-CTD 16 GB 2 rank 2666 MHz

(End of data from sysinfo program)

General Notes

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

KMP_AFFINITY = "granularity=fine,compact"

LD_LIBRARY_PATH = "/home/cpu2006-1.2/lib/ia32:/home/cpu2006-1.2/lib/intel64:/home/cpu2006-1.2/sh10.2"

OMP_NUM_THREADS = "56"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM memory using Redhat Enterprise Linux 7.2

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/transparent_hugepage/enabled

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64

416.gamess: -DSPEC_CPU_LP64

433.milc: -DSPEC_CPU_LP64

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/



SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C240 M5 (Intel Xeon Platinum 8180M, 2.50GHz)

SPECfp2006 = 155

SPECfp_base2006 = 149

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Sep-2017

Hardware Availability: Aug-2017

Software Availability: Apr-2017

Base Portability Flags (Continued)

```

434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.deallI: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

```

Base Optimization Flags

C benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch

Fortran benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch

Benchmarks using both Fortran and C:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch

Peak Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64



SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C240 M5 (Intel Xeon Platinum 8180M, 2.50GHz)

SPECfp2006 = 155

SPECfp_base2006 = 149

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Sep-2017

Hardware Availability: Aug-2017

Software Availability: Apr-2017

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -fno-alias -auto-ilp32

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -unroll2 -inline-level=0 -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -unroll2 -inline-level=0
-qopt-prefetch -parallel

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -inline-calloc -qopt-malloc-options=3
-auto -unroll4

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C240 M5 (Intel Xeon Platinum 8180M, 2.50GHz)

SPECfp2006 = 155

SPECfp_base2006 = 149

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Sep-2017

Hardware Availability: Aug-2017

Software Availability: Apr-2017

Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xCORE-AVX2 -ipo -O3 -no-prec-div -auto-ilp32

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.html>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2-revH.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.xml>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2-revH.xml>

SPEC and SPECfp 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 webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.

Report generated on Fri Oct 13 10:13:29 2017 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 12 October 2017.