



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B200 M3 (Intel Xeon E5-2680 v2, 2.80 GHz)

SPECfp[®]2006 = 93.0

SPECfp_base2006 = 90.3

CPU2006 license: 9019

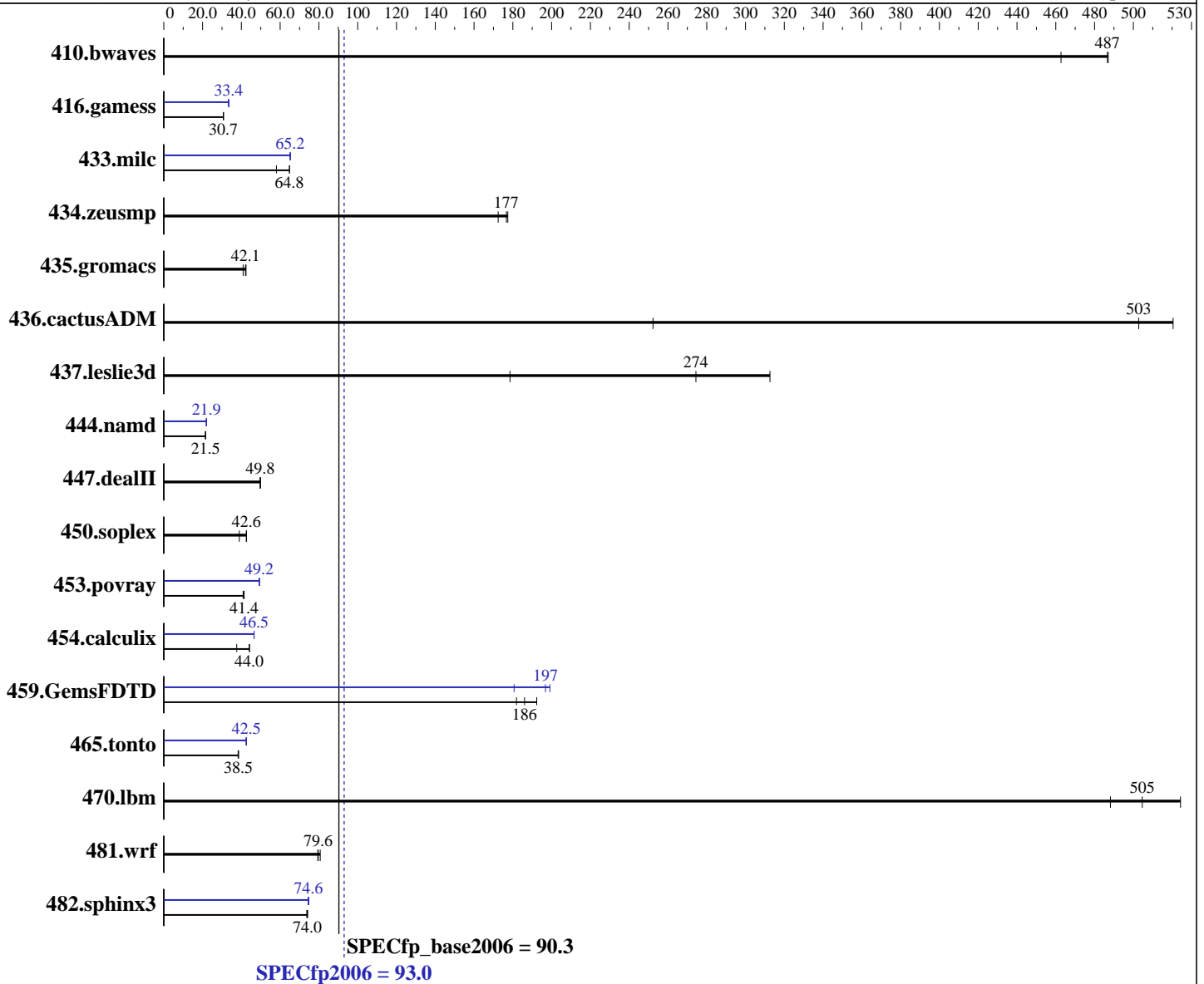
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Oct-2013

Hardware Availability: Sep-2013

Software Availability: Sep-2013



Hardware

CPU Name: Intel Xeon E5-2680 v2
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 20 cores, 2 chips, 10 cores/chip
 CPU(s) orderable: 1,2 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core

Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)
 2.6.32-358.el6.x86_64
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux;
 Fortran: Version 14.0.0.080 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B200 M3 (Intel Xeon E5-2680 v2, 2.80 GHz)

SPECfp2006 = **93.0**

SPECfp_base2006 = **90.3**

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Oct-2013

Hardware Availability: Sep-2013

Software Availability: Sep-2013

L3 Cache: 25 MB I+D on chip per chip
Other Cache: None
Memory: 128 GB (16 x 8 GB 2Rx4 PC3-14900R-13, ECC)
Disk Subsystem: 1 X 146 GB 15000 RPM SAS
Other Hardware: None

System State: Run level 3 (multi-user)
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	27.9	487	29.4	463	<u>27.9</u>	<u>487</u>	27.9	487	29.4	463	<u>27.9</u>	<u>487</u>
416.gamess	636	30.8	<u>637</u>	<u>30.7</u>	638	30.7	584	33.5	586	33.4	<u>586</u>	<u>33.4</u>
433.milc	142	64.8	158	58.1	<u>142</u>	<u>64.8</u>	<u>141</u>	<u>65.2</u>	141	65.2	141	65.2
434.zeusmp	51.3	177	<u>51.5</u>	<u>177</u>	52.8	172	51.3	177	<u>51.5</u>	<u>177</u>	52.8	172
435.gromacs	168	42.4	175	40.9	<u>170</u>	<u>42.1</u>	168	42.4	175	40.9	<u>170</u>	<u>42.1</u>
436.cactusADM	23.0	520	<u>23.8</u>	<u>503</u>	47.4	252	23.0	520	<u>23.8</u>	<u>503</u>	47.4	252
437.leslie3d	<u>34.3</u>	<u>274</u>	30.1	313	52.6	179	<u>34.3</u>	<u>274</u>	30.1	313	52.6	179
444.namd	<u>373</u>	<u>21.5</u>	373	21.5	372	21.5	<u>365</u>	<u>21.9</u>	365	22.0	366	21.9
447.dealII	230	49.7	230	49.8	<u>230</u>	<u>49.8</u>	230	49.7	230	49.8	<u>230</u>	<u>49.8</u>
450.soplex	214	38.9	196	42.6	<u>196</u>	<u>42.6</u>	214	38.9	196	42.6	<u>196</u>	<u>42.6</u>
453.povray	128	41.4	<u>128</u>	<u>41.4</u>	130	40.9	108	49.2	108	49.4	<u>108</u>	<u>49.2</u>
454.calculix	219	37.6	187	44.2	<u>187</u>	<u>44.0</u>	177	46.5	177	46.6	<u>177</u>	<u>46.5</u>
459.GemsFDTD	55.2	192	58.3	182	<u>57.0</u>	<u>186</u>	58.7	181	53.3	199	<u>53.9</u>	<u>197</u>
465.tonto	<u>256</u>	<u>38.5</u>	256	38.5	257	38.3	232	42.5	231	42.5	<u>231</u>	<u>42.5</u>
470.lbm	26.2	524	28.1	488	<u>27.2</u>	<u>505</u>	26.2	524	28.1	488	<u>27.2</u>	<u>505</u>
481.wrf	138	80.7	<u>140</u>	<u>79.6</u>	141	79.4	138	80.7	<u>140</u>	<u>79.6</u>	141	79.4
482.sphinx3	264	73.7	<u>263</u>	<u>74.0</u>	263	74.2	261	74.8	<u>261</u>	<u>74.6</u>	262	74.4

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 HT Technology = Disabled
CPU performance set to HPC
Power Technology set to Custom
CPU Power State C6 set to Enabled
CPU Power State C1 Enhanced set to Disabled
Energy Performance policy set to Performance
Memory RAS configuration set to Maximum Performance
DRAM Clock Throttling Set to Performance
LV DDR Mode set to Performance-mode

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B200 M3 (Intel Xeon E5-2680 v2, 2.80 GHz)

SPECfp2006 = 93.0

SPECfp_base2006 = 90.3

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Oct-2013

Hardware Availability: Sep-2013

Software Availability: Sep-2013

Platform Notes (Continued)

DRAM Refresh Rate Set to 1x

Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6818

\$Rev: 6818 \$ \$Date:: 2012-07-17 # \$ e86d102572650a6e4d596a3cee98f191

running on B200M3CRCR Thu Oct 17 06:48:14 2013

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) CPU E5-2680 v2 @ 2.80GHz

2 "physical id"s (chips)

20 "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 : 10

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

cache size : 25600 KB

From /proc/meminfo

MemTotal: 132088832 kB

HugePages_Total: 0

Hugepagesize: 2048 kB

/usr/bin/lsb_release -d

Red Hat Enterprise Linux Server release 6.4 (Santiago)

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

redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)

system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)

system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:

Linux B200M3CRCR 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013

x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Oct 17 00:33

SPEC is set to: /opt/cpu2006-1.2

Filesystem Type Size Used Avail Use% Mounted on

/dev/sdal ext4 134G 75G 53G 59% /

Additional information from dmidecode:

BIOS Cisco Systems, Inc. B200M3.2.1.2.12.0806201311158 08/06/2013

Memory:

16x 0xAD00 HMT31GR7EFR4C-RD 8 GB 1866 MHz 2 rank

8x NO DIMM NO DIMM

(End of data from sysinfo program)



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B200 M3 (Intel Xeon E5-2680 v2, 2.80 GHz)

SPECfp2006 = 93.0

SPECfp_base2006 = 90.3

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Oct-2013

Hardware Availability: Sep-2013

Software Availability: Sep-2013

General Notes

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

```
LD_LIBRARY_PATH = "/opt/cpu2006-1.2/libs/32:/opt/cpu2006-1.2/libs/64:/opt/cpu2006-1.2/sh"
OMP_NUM_THREADS = "20"
```

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4

Transparent Huge Pages enabled with:

```
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
```

runspec command invoked through numactl i.e.:

```
numactl --interleave=all runspec <etc>
```

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
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.dealII: -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
```



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B200 M3 (Intel Xeon E5-2680 v2, 2.80 GHz)

SPECfp2006 = 93.0

SPECfp_base2006 = 90.3

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Oct-2013

Hardware Availability: Sep-2013

Software Availability: Sep-2013

Base Optimization Flags

C benchmarks:

`-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -ansi-alias`

C++ benchmarks:

`-xAVX -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias`

Fortran benchmarks:

`-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch`

Benchmarks using both Fortran and C:

`-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -ansi-alias`

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`

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -auto-ilp32
-ansi-alias`

470.lbm: `basepeak = yes`

482.sphinx3: `-xAVX -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel`

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B200 M3 (Intel Xeon E5-2680 v2, 2.80 GHz)

SPECfp2006 = 93.0

SPECfp_base2006 = 90.3

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Oct-2013

Hardware Availability: Sep-2013

Software Availability: Sep-2013

Peak Optimization Flags (Continued)

C++ benchmarks:

444.namd: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -fno-alias
-auto-ilp32

447.dealIII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

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

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -opt-prefetch -parallel

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc
-opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

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-ic14.0-official-linux64.20140128.html>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20130717.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20130717.xml>



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B200 M3 (Intel Xeon E5-2680 v2, 2.80 GHz)

SPECfp2006 = 93.0

SPECfp_base2006 = 90.3

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Oct-2013

Hardware Availability: Sep-2013

Software Availability: Sep-2013

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 Thu Jul 24 18:21:41 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 3 December 2013.