SPEC® CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C22 M3 (Intel Xeon E5-2430L, 2.00 GHz)

$SPECfp^{®}2006 =$ 60.2
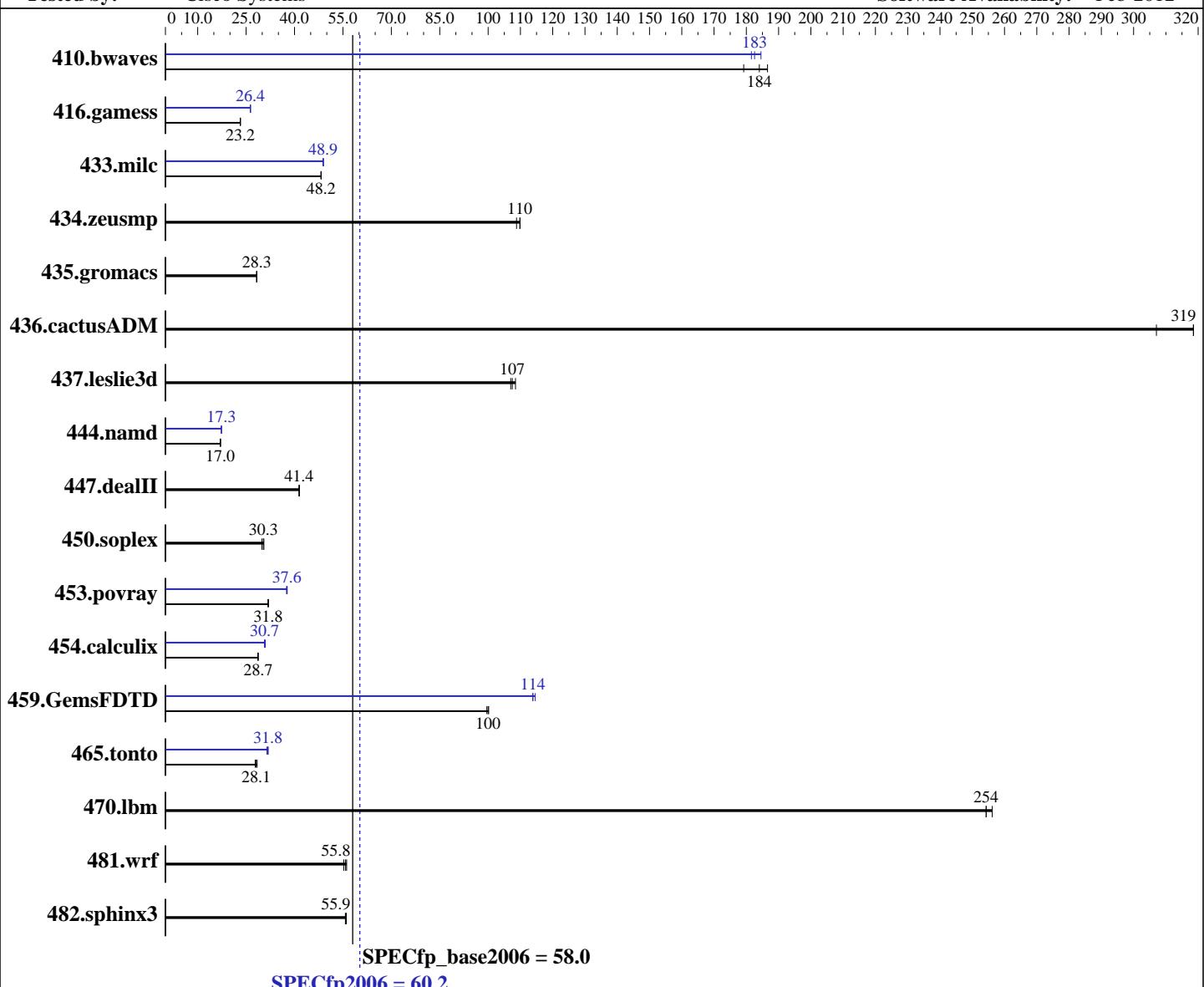
$SPECfp\_base2006 =$ 58.0

CPU2006 license: 9019
Test sponsor: Cisco Systems
Tested by: Cisco Systems

Test date: Aug-2012
Hardware Availability: Aug-2012
Software Availability: Feb-2012

Benchmark	Base	Peak
410.bwaves	184	183
416.gamess	23.2	26.4
433.milc	48.2	48.9
434.zeusmp	110	
435.gromacs	28.3	
436.cactusADM	319	
437.leslie3d	107	
444.namd	17.0	17.3
447.dealII	41.4	
450.soplex	30.3	
453.povray	31.8	37.6
454.calculix	28.7	30.7
459.GemsFDTD	100	114
465.tonto	28.1	31.8
470.lbm	254	
481.wrf	55.8	
482.sphinx3	55.9	

SPECfp_base2006 = 58.0
SPECfp2006 = 60.2

Hardware
CPU Name: Intel Xeon E5-2430L
CPU Characteristics: Intel Turbo Boost Technology up to 2.50 GHz
CPU MHz: 2000
FPU: Integrated
CPU(s) enabled: 12 cores, 2 chips, 6 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 6.2 (Santiago)
2.6.32-220.el6.x86_64
Compiler: C/C++: Version 12.1.3.293 of Intel C++ Studio XE for Linux;
Fortran: Version 12.1.3.293 of Intel Fortran Studio XE for Linux
Auto Parallel: Yes
File System: ext4
Continued on next page

SPEC CFP2006 Result

Cisco Systems

Cisco UCS C22 M3 (Intel Xeon E5-2430L, 2.00 GHz)

SPECfp2006 =	60.2
SPECfp_base2006 =	58.0

CPU2006 license:	9019	**Test date:**	Aug-2012
Test sponsor:	Cisco Systems	**Hardware Availability:**	Aug-2012
Tested by:	Cisco Systems	**Software Availability:**	Feb-2012

L3 Cache:	15 MB I+D on chip per chip	System State:	Run level 3 (multi-user)
Other Cache:	None	Base Pointers:	64-bit
Memory:	96 GB (12 x 8 GB 2Rx4 PC3-12800R-11, ECC, running at 1333 MHz and CL9)	Peak Pointers:	32/64-bit
		Other Software:	None
Disk Subsystem:	1 X 146 GB 15000 RPM SAS		
Other Hardware:	None		

Results Table

	Base						Peak					
Benchmark	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
410.bwaves	**73.8**	**184**	72.8	187	75.8	179	74.8	182	73.6	185	**74.4**	**183**
416.gamess	**843**	**23.2**	844	23.2	843	23.2	743	26.4	**743**	**26.4**	745	26.3
433.milc	190	48.2	**190**	**48.2**	190	48.2	188	48.8	187	49.0	**188**	**48.9**
434.zeusmp	**82.8**	**110**	82.8	110	83.6	109	**82.8**	**110**	82.8	110	83.6	109
435.gromacs	253	28.3	**253**	**28.3**	252	28.3	253	28.3	**253**	**28.3**	252	28.3
436.cactusADM	38.9	307	**37.5**	**319**	37.5	319	38.9	307	**37.5**	**319**	37.5	319
437.leslie3d	86.7	108	**87.5**	**107**	87.9	107	86.7	108	**87.5**	**107**	87.9	107
444.namd	471	17.0	471	17.0	**471**	**17.0**	462	17.4	**462**	**17.3**	463	17.3
447.dealII	**276**	**41.4**	276	41.4	275	41.5	**276**	**41.4**	276	41.4	275	41.5
450.soplex	**275**	**30.3**	273	30.5	279	29.9	**275**	**30.3**	273	30.5	279	29.9
453.povray	167	31.9	**167**	**31.8**	167	31.8	**141**	**37.6**	142	37.6	141	37.7
454.calculix	288	28.7	**287**	**28.7**	287	28.7	269	30.7	**268**	**30.7**	267	31.0
459.GemsFDTD	**106**	**100**	107	99.6	106	100	**93.2**	**114**	92.6	115	93.2	114
465.tonto	354	27.8	346	28.4	**350**	**28.1**	**310**	**31.8**	313	31.4	309	31.8
470.lbm	**54.0**	**254**	53.6	256	54.0	254	**54.0**	**254**	53.6	256	54.0	254
481.wrf	202	55.3	199	56.1	**200**	**55.8**	202	55.3	199	56.1	**200**	**55.8**
482.sphinx3	350	55.8	**349**	**55.9**	348	56.0	350	55.8	**349**	**55.9**	348	56.0

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

```
Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on localhost.localdomain Fri Aug 31 01:05:16 2012

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
```

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C22 M3 (Intel Xeon E5-2430L, 2.00 GHz)

$SPECfp2006 =$ 60.2

$SPECfp\_base2006 =$ 58.0

CPU2006 license: 9019
Test sponsor: Cisco Systems
Tested by: Cisco Systems

Test date: Aug-2012
Hardware Availability: Aug-2012
Software Availability: Feb-2012

Platform Notes (Continued)

```
    model name : Intel(R) Xeon(R) CPU E5-2430L 0 @ 2.00GHz
       2 "physical id"s (chips)
       12 "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 : 6
       siblings  : 6
       physical 0: cores 0 1 2 3 4 5
       physical 1: cores 0 1 2 3 4 5
    cache size : 15360 KB

  From /proc/meminfo
    MemTotal:       99042468 kB
    HugePages_Total:       0
    Hugepagesize:       2048 kB

  /usr/bin/lsb_release -d
    Red Hat Enterprise Linux Server release 6.2 (Santiago)

  From /etc/*release* /etc/*version*
    redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
    system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
    system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

  uname -a:
    Linux localhost.localdomain 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13
    EST 2011 x86_64 x86_64 x86_64 GNU/Linux

  run-level 3 Aug 31 01:03

  SPEC is set to: /opt/cpu2006-1.2
    Filesystem     Type     Size  Used Avail Use% Mounted on
    /dev/sda1      ext4     134G   10G  118G   8% /

  Additional information from dmidecode:
    Memory:
     12x 0xCE00 M393B1K70DH0-YK0 8 GB 1600 MHz 2 rank

  (End of data from sysinfo program)
```

General Notes

```
 Environment variables set by runspec before the start of the run:
 KMP_AFFINITY = "granularity=fine,compact,1,0"
 LD_LIBRARY_PATH = "/opt/cpu2006-1.2/libs/32:/opt/cpu2006-1.2/libs/64"
 OMP_NUM_THREADS = "12"
 Intel HT Technology=disable
  Binaries compiled on a system with 2 X Intel Xeon E5-2690 CPU + 128 GB memory using RHEL 6.2
  Transparent Huge Pages enabled with:
  echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
```

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C22 M3 (Intel Xeon E5-2430L, 2.00 GHz)

$SPECfp2006 =$ 60.2

$SPECfp\_base2006 =$ 58.0

CPU2006 license: 9019
Test sponsor: Cisco Systems
Tested by: Cisco Systems

Test date: Aug-2012
Hardware Availability: Aug-2012
Software Availability: Feb-2012

General Notes (Continued)

```
 Filesystem page cache cleared with:
 echo 1>        /proc/sys/vm/drop_caches

 Submitted_by: "Sheshgiri I (shei)" <shei@cisco.com>
 Submitted: Thu Sep 13 12:31:07 EDT 2012
 Submission: cpu2006-20120903-24385.sub
```

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
```

Base Optimization Flags

C benchmarks:
```
    -xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
    -ansi-alias
```

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS C22 M3 (Intel Xeon E5-2430L, 2.00 GHz)

$SPECfp2006 =$ 60.2

$SPECfp\_base2006 =$ 58.0

CPU2006 license: 9019	**Test date:** Aug-2012
Test sponsor: Cisco Systems	**Hardware Availability:** Aug-2012
Tested by: Cisco Systems	**Software Availability:** Feb-2012

Base Optimization Flags (Continued)

C++ benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias
```

Fortran benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
```

Benchmarks using both Fortran and C:
```
-xAVX -ipo -O3 -no-prec-div -static -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) -static -auto-ilp32`
            `-ansi-alias`

    470.lbm: `basepeak = yes`

    482.sphinx3: `basepeak = yes`

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`

SPEC CFP2006 Result

Cisco Systems

Cisco UCS C22 M3 (Intel Xeon E5-2430L, 2.00 GHz)

$SPECfp2006 =$ 60.2

$SPECfp\_base2006 =$ 58.0

CPU2006 license: 9019
Test sponsor: Cisco Systems
Tested by: Cisco Systems

Test date: Aug-2012
Hardware Availability: Aug-2012
Software Availability: Feb-2012

Peak Optimization Flags (Continued)

447.dealII: 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: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -parallel
-static

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- -static

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-ic12.1-official-linux64.20120425.html
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.xml
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.xml

SPEC CFP2006 Result

Cisco Systems

Cisco UCS C22 M3 (Intel Xeon E5-2430L, 2.00 GHz)

SPECfp2006 =	60.2
SPECfp_base2006 =	58.0

CPU2006 license: 9019
Test sponsor: Cisco Systems
Tested by: Cisco Systems

Test date: Aug-2012
Hardware Availability: Aug-2012
Software Availability: Feb-2012

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 09:18:18 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 25 September 2012.