



SPEC® CFP2006 Result

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Cisco Systems

SPECfp®_rate2006 = 159

Cisco B200-M1 (Intel Xeon E5520, 2.26 GHz)

SPECfp_rate_base2006 = 154

CPU2006 license: 9019

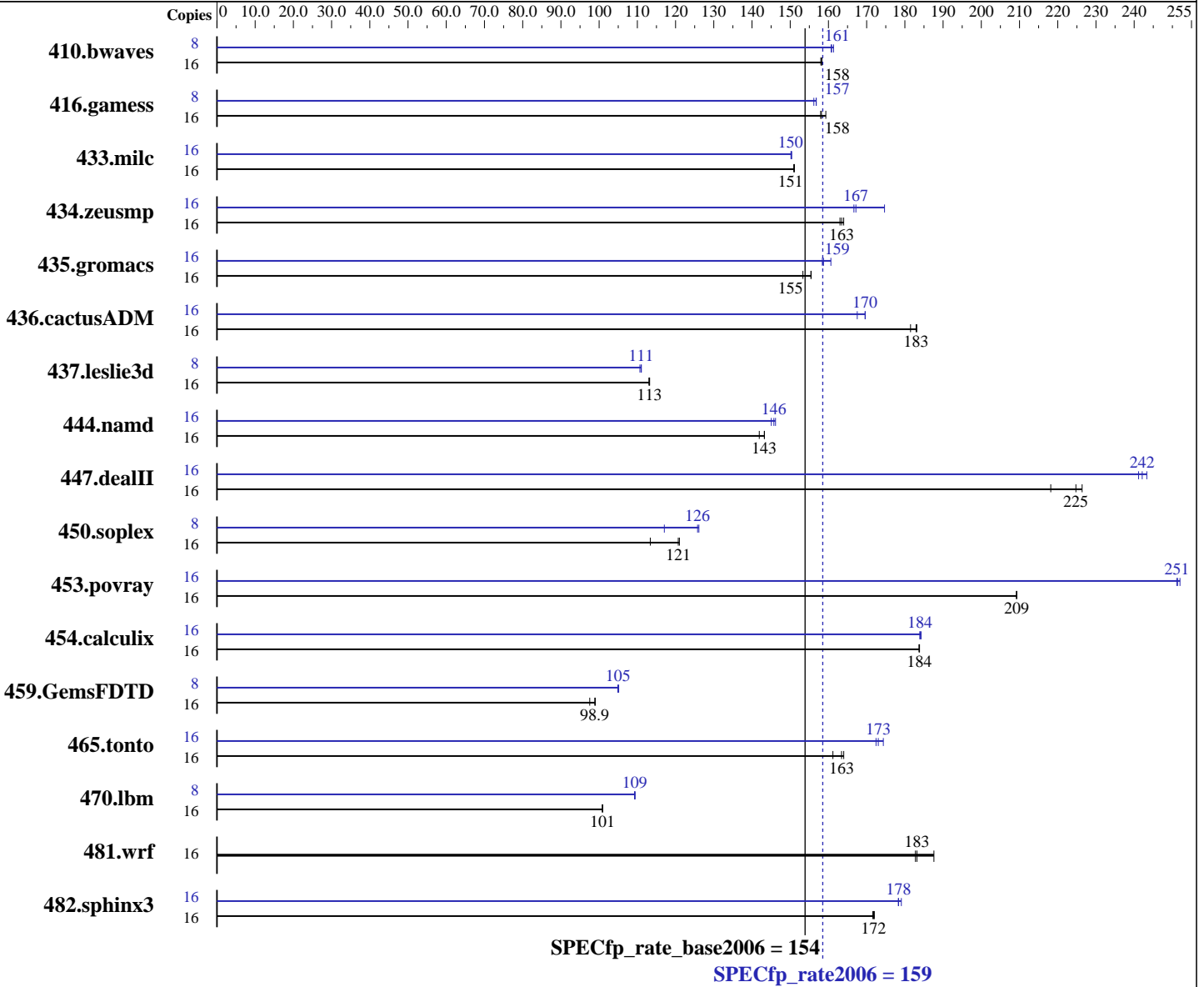
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: May-2009

Hardware Availability: May-2009

Software Availability: May-2009



Hardware

CPU Name: Intel Xeon E5520
 CPU Characteristics: Intel Turbo Boost Technology up to 2.53 GHz
 CPU MHz: 2267
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1, 2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core

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Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default, RC5
 Compiler: Intel C++ and Fortran Compiler 11.0 for Linux Build 20090131 Package ID: l_cproc_p_11.0.080, l_cprof_p_11.0.080
 Auto Parallel: No
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit

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L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 24 GB (12 x 2GB DDR3 1066 MHz)
Disk Subsystem: 73 GB SAS ST973451SS, 15000 RPM
Other Hardware: None

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

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	16	<u>1374</u>	<u>158</u>	1374	158	1376	158	8	<u>676</u>	<u>161</u>	674	161	676	161
416.gamess	16	<u>1981</u>	<u>158</u>	1983	158	1966	159	8	999	157	<u>999</u>	<u>157</u>	1003	156
433.milc	16	972	151	973	151	<u>973</u>	<u>151</u>	16	977	150	978	150	<u>978</u>	<u>150</u>
434.zeusmp	16	<u>891</u>	<u>163</u>	888	164	893	163	16	874	167	834	175	<u>871</u>	<u>167</u>
435.gromacs	16	735	155	<u>735</u>	<u>155</u>	745	153	16	711	161	721	158	<u>720</u>	<u>159</u>
436.cactusADM	16	1054	181	1044	183	<u>1045</u>	<u>183</u>	16	1127	170	<u>1128</u>	<u>170</u>	1141	168
437.leslie3d	16	1328	113	<u>1329</u>	<u>113</u>	1331	113	8	680	111	<u>678</u>	<u>111</u>	677	111
444.namd	16	904	142	<u>896</u>	<u>143</u>	896	143	16	878	146	<u>881</u>	<u>146</u>	885	145
447.dealII	16	809	226	<u>814</u>	<u>225</u>	839	218	16	759	241	<u>756</u>	<u>242</u>	752	243
450.soplex	16	1177	113	<u>1105</u>	<u>121</u>	1103	121	8	570	117	529	126	<u>531</u>	<u>126</u>
453.povray	16	407	209	407	209	<u>407</u>	<u>209</u>	16	339	251	<u>339</u>	<u>251</u>	338	252
454.calculix	16	718	184	719	184	<u>718</u>	<u>184</u>	16	718	184	716	184	<u>717</u>	<u>184</u>
459.GemsFDTD	16	1714	99.0	<u>1717</u>	<u>98.9</u>	1740	97.5	8	<u>808</u>	<u>105</u>	809	105	807	105
465.tonto	16	977	161	<u>963</u>	<u>163</u>	960	164	16	903	174	913	172	<u>910</u>	<u>173</u>
470.lbm	16	2180	101	<u>2179</u>	<u>101</u>	2178	101	8	1004	109	1006	109	<u>1006</u>	<u>109</u>
481.wrf	16	953	188	<u>976</u>	<u>183</u>	978	183	16	953	188	<u>976</u>	<u>183</u>	978	183
482.sphinx3	16	1817	172	1813	172	<u>1815</u>	<u>172</u>	16	1749	178	1741	179	<u>1748</u>	<u>178</u>

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

Submit Notes

The config file option 'submit' was used.
numactl --localalloc --physcpubind=\$BIND was used to bind copies to the cores using following bind list:
bind = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

Operating System Notes

ulimit -s unlimited was used to set the stack size



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General Notes

Submitted_by: "Ven Immani (immaniv)" <immaniv@cisco.com>
Submitted: Mon Jun 1 19:05:24 EDT 2009
Submission: cpu2006-20090522-07480.sub

Submitted_by: "Ven Immani (immaniv)" <immaniv@cisco.com>
Submitted: Wed Jun 10 17:42:18 EDT 2009
Submission: cpu2006-20090522-07480.sub

Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icc ifort

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.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



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Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static

Fortran benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static

Benchmarks using both Fortran and C:

-xSSE4.2 -ipo -O3 -no-prec-div -static

Peak Compiler Invocation

C benchmarks (except as noted below):

icc

482.sphinx3: icc -m32

C++ benchmarks (except as noted below):

icpc

450.soplex: icpc -m32

Fortran benchmarks (except as noted below):

ifort

437.leslie3d: ifort -m32

Benchmarks using both Fortran and C:

icc ifort

Peak 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
 444.namd: -DSPEC_CPU_LP64
 447.dealII: -DSPEC_CPU_LP64
 453.povray: -DSPEC_CPU_LP64
 454.calculix: -DSPEC_CPU_LP64 -nofor_main
 459.GemsFDTD: -DSPEC_CPU_LP64

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Peak Portability Flags (Continued)

465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

433.milc: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-fno-alias

470.lbm: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch
-auto-ilp32

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-fno-alias -auto-ilp32

447.dealII: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll2 -ansi-alias -scalar-rep-

450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-opt-malloc-options=3

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll2 -Ob0 -ansi-alias -scalar-rep-

434.zeusmp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)

437.leslie3d: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-opt-malloc-options=3 -opt-prefetch

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Peak Optimization Flags (Continued)

459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll2 -Ob0 -opt-prefetch

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-opt-prefetch -auto-ilp32

436.cactusADM: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll2 -opt-prefetch -auto-ilp32

454.calculix: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090710.16.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090710.16.xml>

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For other inquiries, please contact webmaster@spec.org.

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