



SPEC® CFP2006 Result

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Itautec

SPECfp®_rate2006 = 108

Servidor Itautec LX115 (Intel Xeon E3-1220)

SPECfp_rate_base2006 = 106

CPU2006 license: 9001

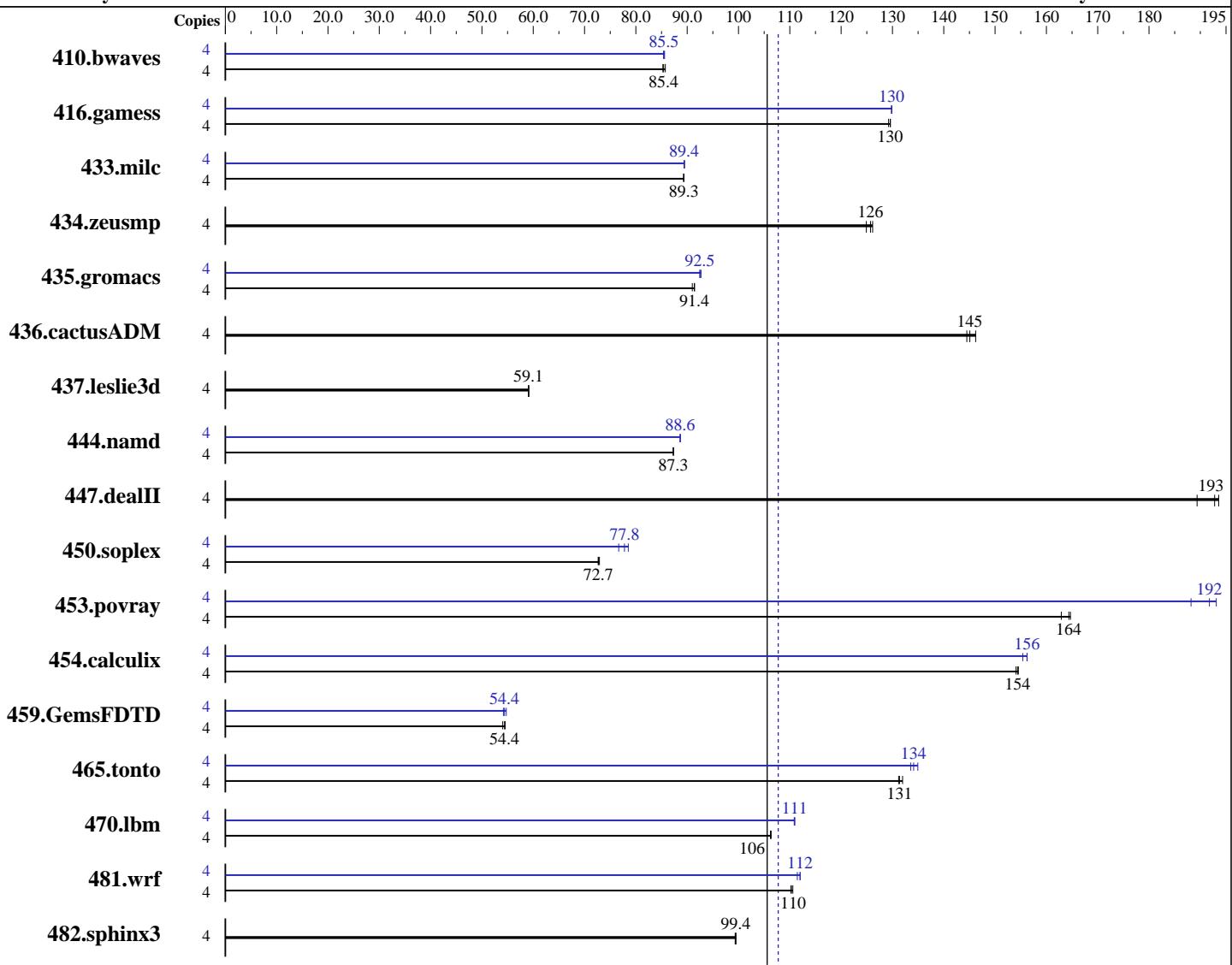
Test date: Mar-2012

Test sponsor: Itautec

Hardware Availability: Jun-2012

Tested by: Itautec

Software Availability: Dec-2011



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Hardware

CPU Name: Intel Xeon E3-1220
CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz
CPU MHz: 3100
FPU: Integrated
CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
CPU(s) orderable: 1 chip
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core

Software

Operating System: Red Hat Enterprise Linux Server Release 6.2, 2.6.32-220.el6.x86_64
Compiler: C/C++/Fortran: Version 12.1.0 of Intel Compiler XE Build 20111011
Auto Parallel: No
File System: ext4
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 32/64-bit

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L3 Cache: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 8 GB (4 x 2 GB 2Rx8 PC3-10600U-9, ECC)
 Disk Subsystem: 500 GB, SATA-2, 7200 RPM
 Other Hardware: None

Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	634	85.7	638	85.3	636	85.4	4	635	85.6	637	85.4	636	85.5
416.gamess	4	604	130	606	129	604	130	4	603	130	603	130	603	130
433.milc	4	411	89.3	411	89.3	411	89.3	4	410	89.5	411	89.4	411	89.4
434.zeusmp	4	289	126	291	125	290	126	4	289	126	291	125	290	126
435.gromacs	4	314	91.0	312	91.4	312	91.4	4	308	92.7	309	92.5	309	92.5
436.cactusADM	4	327	146	329	145	331	144	4	327	146	329	145	331	144
437.leslie3d	4	636	59.1	636	59.1	636	59.1	4	636	59.1	636	59.1	636	59.1
444.namd	4	367	87.3	367	87.3	367	87.3	4	362	88.6	362	88.7	362	88.6
447.dealII	4	237	193	236	194	242	189	4	237	193	236	194	242	189
450.soplex	4	459	72.7	458	72.9	459	72.7	4	435	76.7	429	77.8	425	78.5
453.povray	4	129	164	131	163	129	165	4	111	192	110	193	113	188
454.calculix	4	214	154	214	155	214	154	4	211	156	212	155	211	156
459.GemsFDTD	4	785	54.1	778	54.5	780	54.4	4	783	54.2	780	54.4	775	54.7
465.tonto	4	300	131	298	132	300	131	4	292	135	293	134	295	134
470.lbm	4	517	106	517	106	517	106	4	495	111	495	111	496	111
481.wrf	4	404	111	405	110	405	110	4	401	111	399	112	399	112
482.sphinx3	4	785	99.4	784	99.4	783	99.5	4	785	99.4	784	99.4	783	99.5

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 was used to bind copies to the cores

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run.
 Large pages were not enabled for this run

Base Compiler Invocation

C benchmarks:
 icc -m64

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Base Compiler Invocation (Continued)

C++ benchmarks:

icpc -m64

Fortran benchmarks:

fort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.games: -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 -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

Fortran benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch

Benchmarks using both Fortran and C:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3



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Peak Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks (except as noted below):

icpc -m64

450.soplex: icpc -m32

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

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
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
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

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
-opt-mem-layout-trans=3

470.lbm: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3
-ansi-alias -opt-prefetch -auto-ilp32
-opt-mem-layout-trans=3

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Peak Optimization Flags (Continued)

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

447.dealII: basepeak = yes

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

453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll14 -ansi-alias

Fortran benchmarks:

410.bwaves: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static

416.gamess: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(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) -opt-malloc-options=3

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -unroll14 -auto -inline-calloc
-opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch
-static -auto-ilp32 -opt-mem-layout-trans=3

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -static -auto-ilp32
-opt-mem-layout-trans=3

481.wrf: Same as 454.calculix



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

http://www.spec.org/cpu2006/flags/Itautec-Servidor_Itautec-Intel-Linux-Platform.html
<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html>

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

http://www.spec.org/cpu2006/flags/Itautec-Servidor_Itautec-Intel-Linux-Platform.xml
<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

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