



SPEC® CFP2006 Result

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Itautec

SPECfp®_rate2006 = 223

Servidor Itautec MX214 (Intel Xeon E5649)

SPECfp_rate_base2006 = 219

CPU2006 license: 9001

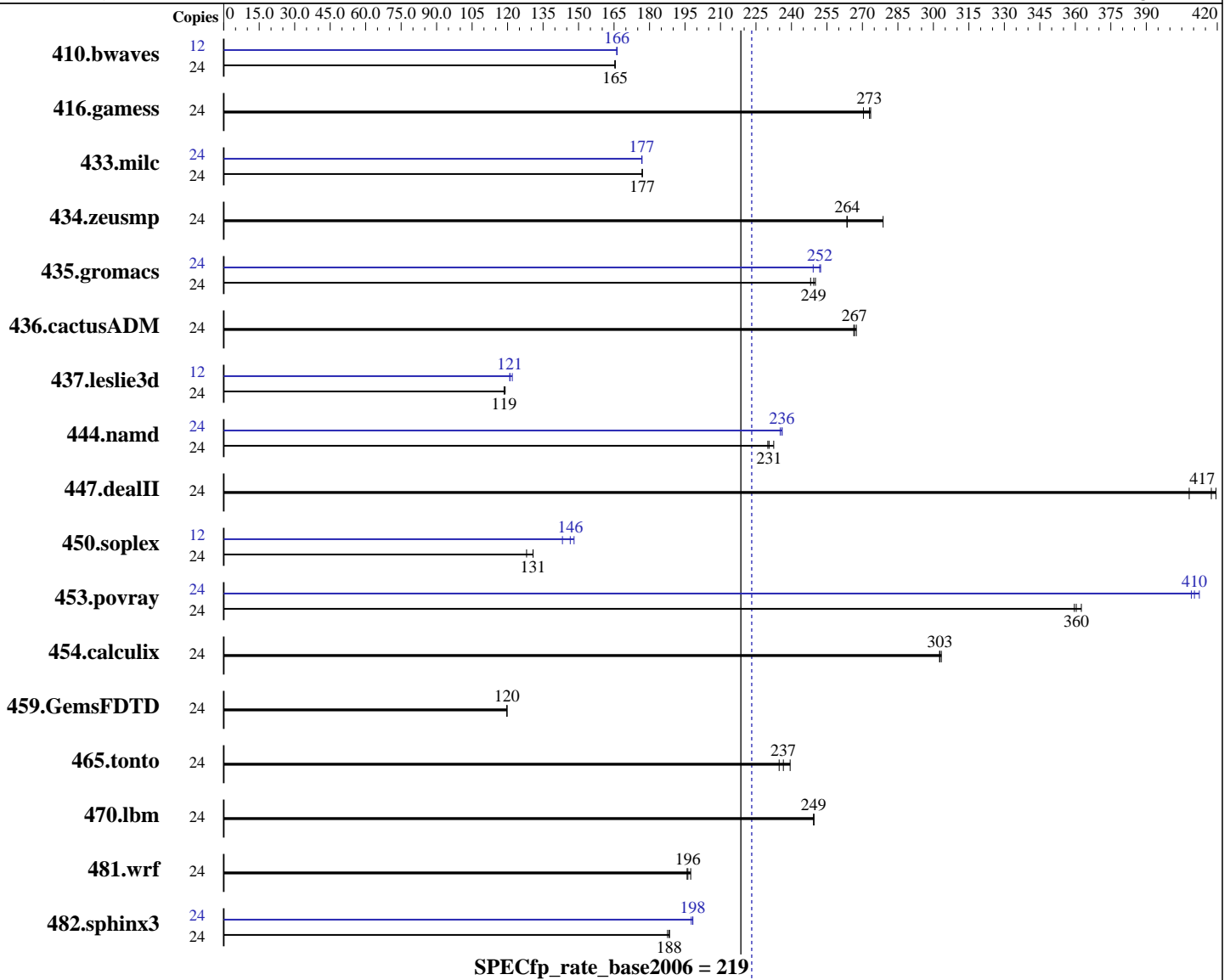
Test date: Nov-2011

Test sponsor: Itautec

Hardware Availability: Jul-2011

Tested by: Itautec

Software Availability: Aug-2011



Hardware

CPU Name: Intel Xeon E5649
 CPU Characteristics: Intel Turbo Boost Technology up to 2.93 GHz
 CPU MHz: 2533
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 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 SP1 (x86_64), Kernel 2.6.32.12-0.7-default
 Compiler: C/C++/Fortran: Version 12.1.0 of Intel Compiler XE Build 20110811
 Auto Parallel: No
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit

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L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 1 x 500 GB SAS, 15000 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	24	1973	165	<u>1971</u>	<u>165</u>	1970	166	12	980	166	<u>981</u>	<u>166</u>	982	166
416.gamess	24	<u>1721</u>	<u>273</u>	1718	273	1738	270	24	<u>1721</u>	<u>273</u>	1718	273	1738	270
433.milc	24	1245	177	1245	177	<u>1245</u>	<u>177</u>	24	1246	177	1246	177	<u>1246</u>	<u>177</u>
434.zeusmp	24	784	279	<u>829</u>	<u>264</u>	829	263	24	784	279	<u>829</u>	<u>264</u>	829	263
435.gromacs	24	685	250	691	248	<u>687</u>	<u>249</u>	24	679	252	<u>680</u>	<u>252</u>	688	249
436.cactusADM	24	1072	267	1077	266	<u>1076</u>	<u>267</u>	24	1072	267	1077	266	<u>1076</u>	<u>267</u>
437.leslie3d	24	<u>1902</u>	<u>119</u>	1896	119	1904	119	12	<u>932</u>	<u>121</u>	933	121	925	122
444.namd	24	828	233	<u>835</u>	<u>231</u>	837	230	24	818	235	<u>816</u>	<u>236</u>	815	236
447.dealII	24	<u>658</u>	<u>417</u>	655	419	673	408	24	<u>658</u>	<u>417</u>	655	419	673	408
450.soplex	24	1530	131	1563	128	<u>1531</u>	<u>131</u>	12	699	143	<u>683</u>	<u>146</u>	676	148
453.povray	24	352	363	355	360	<u>354</u>	<u>360</u>	24	312	409	310	412	<u>311</u>	<u>410</u>
454.calculix	24	653	303	<u>654</u>	<u>303</u>	654	303	24	653	303	<u>654</u>	<u>303</u>	654	303
459.GemsFDTD	24	2127	120	2127	120	<u>2127</u>	<u>120</u>	24	2127	120	2127	120	<u>2127</u>	<u>120</u>
465.tonto	24	1006	235	<u>998</u>	<u>237</u>	986	239	24	1006	235	<u>998</u>	<u>237</u>	986	239
470.lbm	24	<u>1322</u>	<u>249</u>	1322	249	1322	249	24	<u>1322</u>	<u>249</u>	1322	249	1322	249
481.wrf	24	<u>1366</u>	<u>196</u>	1358	197	1369	196	24	<u>1366</u>	<u>196</u>	1358	197	1369	196
482.sphinx3	24	2482	188	2493	188	<u>2484</u>	<u>188</u>	24	<u>2359</u>	<u>198</u>	2358	198	2367	198

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

Platform Notes

Data Reuse disabled in BIOS.



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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:
-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias

Fortran benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static

Benchmarks using both Fortran and C:
-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias



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Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

482.sphinx3: icc -m32

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
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

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) -prof-use(pass 2) -static -auto-ilp32

470.lbm: basepeak = yes

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

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Peak Optimization Flags (Continued)

C++ benchmarks:

444.namd: -xSSE4.2(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: -xSSE4.2(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
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Fortran benchmarks:

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

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

459.GemsFDTD: basepeak = yes

465.tonto: basepeak = yes

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) -prof-use(pass 2) -opt-prefetch
-static -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/Itautec-Intel-Linux64-Platform.html>

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-linux64.html>



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

<http://www.spec.org/cpu2006/flags/Itautec-Intel-Linux64-Platform.xml>

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-linux64.xml>

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Tested with SPEC CPU2006 v1.1.
Report generated on Thu Jul 24 00:47:42 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 20 December 2011.