



# SPEC® CFP2006 Result

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**Itautec**

**SPECfp®\_rate2006 = 171**

Servidor Itautec MX223 (Intel Xeon E5630)

**SPECfp\_rate\_base2006 = 164**

CPU2006 license: 9001

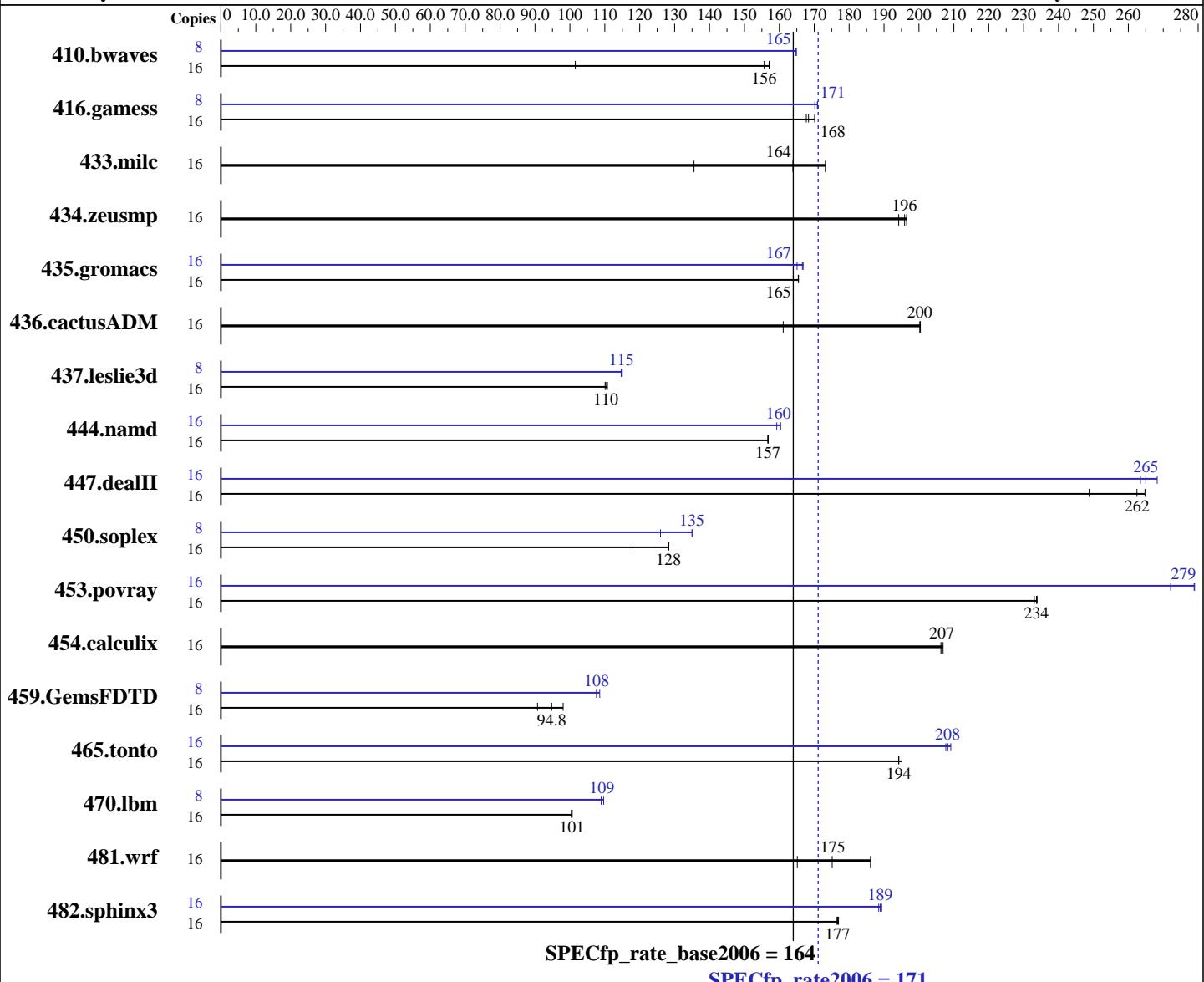
Test date: Jul-2010

Test sponsor: Itautec

Hardware Availability: Apr-2010

Tested by: Itautec

Software Availability: Jan-2010



## Hardware

CPU Name: Intel Xeon E5630  
CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
CPU MHz: 2533  
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

## Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64), Kernel 2.6.27.19-5-smp  
Compiler: Intel C++ and Fortran Professional Compiler 11.1 for Linux Build 20091130 Package ID: l\_cproc\_p\_11.1.064, l\_cprof\_p\_11.1.064  
Auto Parallel: No  
File System: ReiserFS  
System State: Run level 3 (multi-user)

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L3 Cache: 12 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 24 GB (6 x 4GB, DDR3-1066, Dual Rank, CL 7, ECC)  
 Disk Subsystem: 1 x 160 GB SATA-2, 7200 RPM  
 Other Hardware: None

Base Pointers: 64-bit  
 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	2141	102	1384	157	<b>1397</b>	<b>156</b>	8	659	165	<b>660</b>	<b>165</b>	660	165
416.gamess	16	1842	170	1868	168	<b>1861</b>	<b>168</b>	8	920	170	<b>917</b>	<b>171</b>	916	171
433.milc	16	1084	136	848	173	<b>896</b>	<b>164</b>	16	1084	136	848	173	<b>896</b>	<b>164</b>
434.zeusmp	16	750	194	<b>743</b>	<b>196</b>	741	196	16	750	194	<b>743</b>	<b>196</b>	741	196
435.gromacs	16	691	165	690	166	<b>691</b>	<b>165</b>	16	685	167	692	165	<b>686</b>	<b>167</b>
436.cactusADM	16	1187	161	<b>955</b>	<b>200</b>	954	200	16	1187	161	<b>955</b>	<b>200</b>	954	200
437.leslie3d	16	<b>1364</b>	<b>110</b>	1366	110	1358	111	8	<b>655</b>	<b>115</b>	656	115	654	115
444.namd	16	819	157	<b>819</b>	<b>157</b>	818	157	16	806	159	800	160	<b>801</b>	<b>160</b>
447.dealII	16	736	249	<b>697</b>	<b>262</b>	691	265	16	<b>691</b>	<b>265</b>	695	263	682	268
450.soplex	16	1133	118	<b>1040</b>	<b>128</b>	1040	128	8	530	126	<b>494</b>	<b>135</b>	494	135
453.povray	16	364	234	<b>364</b>	<b>234</b>	365	233	16	<b>305</b>	<b>279</b>	313	272	305	279
454.calculix	16	<b>639</b>	<b>207</b>	638	207	640	206	16	<b>639</b>	<b>207</b>	638	207	640	206
459.GemsFDTD	16	1871	90.7	<b>1791</b>	<b>94.8</b>	1731	98.1	8	789	108	782	109	<b>788</b>	<b>108</b>
465.tonto	16	<b>811</b>	<b>194</b>	807	195	811	194	16	<b>756</b>	<b>208</b>	758	208	753	209
470.lbm	16	2189	100	2184	101	<b>2187</b>	<b>101</b>	8	1002	110	1009	109	<b>1007</b>	<b>109</b>
481.wrf	16	1082	165	960	186	<b>1020</b>	<b>175</b>	16	1082	165	960	186	<b>1020</b>	<b>175</b>
482.sphinx3	16	1767	177	<b>1764</b>	<b>177</b>	1762	177	16	1654	188	<b>1651</b>	<b>189</b>	1647	189

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.

## General Notes

This result was measured on the Servidor Itautec MX223.  
 The Servidor Itautec MX203 and the Servidor Itautec MX223 are electronically equivalent.



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**Test date:** Jul-2010

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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

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



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Tested by: Itaute

Software Availability: Jan-2010

## 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: basepeak = yes

470.lbm: -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 -ansi-alias -auto-ilp32

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -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) -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)  
-unroll12 -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)  
-unroll14 -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)  
-unroll12 -Ob0 -ansi-alias -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: -xsse4.2 -ipo -O3 -no-prec-div -static

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)  
-unroll12 -Ob0

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)  
-unroll14 -auto -inline-calloc -opt-malloc-options=3

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: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes



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

<http://www.spec.org/cpu2006/flags/Itautec-Intel-ic11.1-linux64-revE.html>

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

<http://www.spec.org/cpu2006/flags/Itautec-Intel-ic11.1-linux64-revE.xml>

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