



# SPEC® CFP2006 Result

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## Itaotec

### SPECfp®\_rate2006 = 73.1

### Servidor Itaotec LX103 (Intel Xeon X3440)

### SPECfp\_rate\_base2006 = 70.2

CPU2006 license: 9001

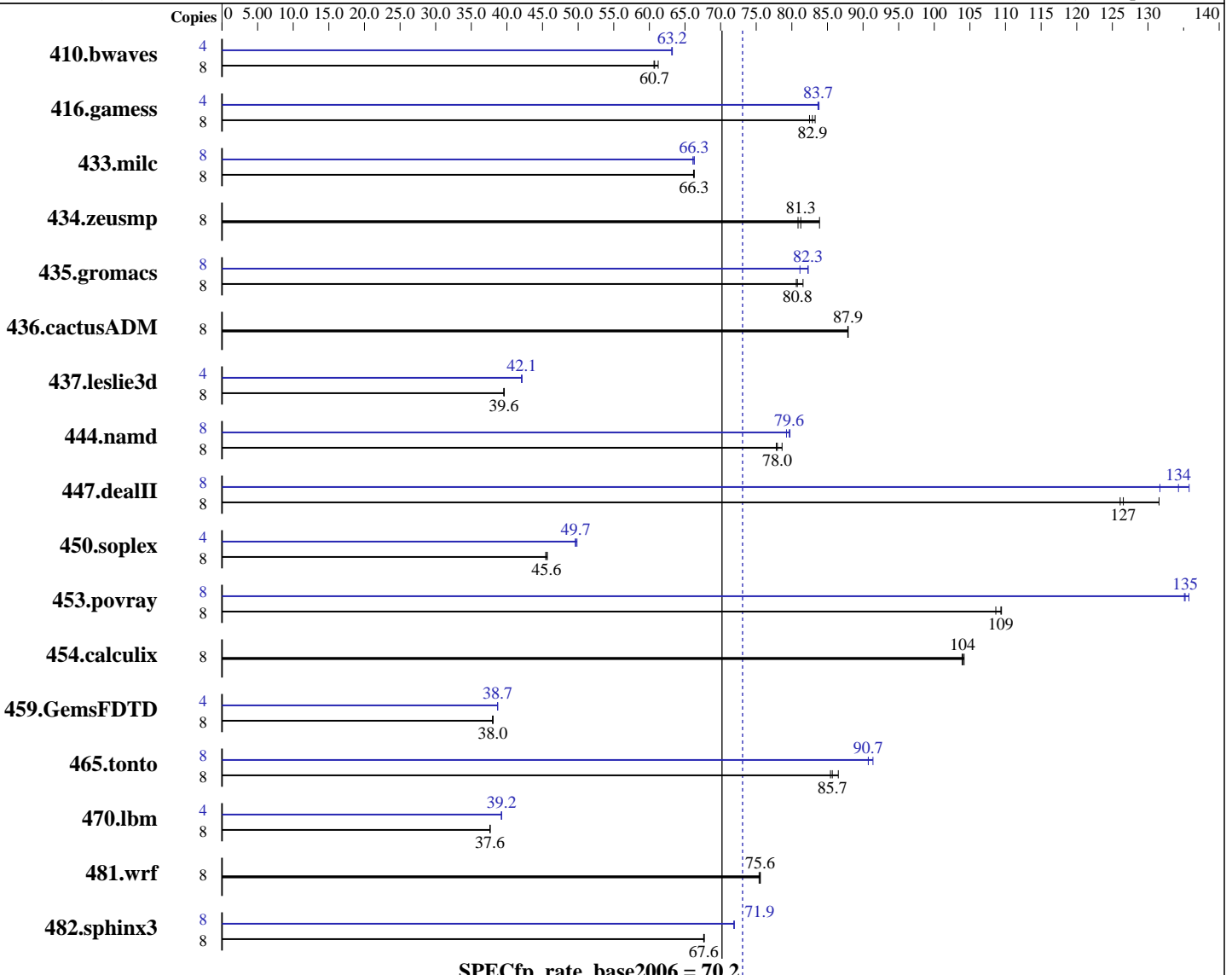
Test sponsor: Itaotec

Tested by: Itaotec

Test date: Jul-2010

Hardware Availability: Dec-2009

Software Availability: Apr-2010



SPECfp\_rate\_base2006 = 70.2

SPECfp\_rate2006 = 73.1

#### Hardware

CPU Name: Intel Xeon X3440  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.93 GHz  
 CPU MHz: 2533  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core  
 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

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#### 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 20100414 Package ID: l\_cproc\_p\_11.1.072, l\_cprof\_p\_11.1.072  
 Auto Parallel: No  
 File System: ReiserFS  
 System State: Run level 3 (multi-user)

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L3 Cache: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 8 GB (4 x 2GB, DDR3-1333, Dual Rank, CL 9, 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	8	1775	61.2	<u>1790</u>	<u>60.7</u>	1793	60.6	4	861	63.1	860	63.2	<u>860</u>	<u>63.2</u>
416.gamess	8	<u>1890</u>	<u>82.9</u>	1881	83.3	1899	82.5	4	934	83.8	<u>936</u>	<u>83.7</u>	936	83.7
433.milc	8	1108	66.3	<u>1108</u>	<u>66.3</u>	1109	66.2	8	<u>1108</u>	<u>66.3</u>	1111	66.1	1108	66.3
434.zeusmp	8	868	83.9	900	80.9	<u>896</u>	<u>81.3</u>	8	868	83.9	900	80.9	<u>896</u>	<u>81.3</u>
435.gromacs	8	708	80.6	<u>707</u>	<u>80.8</u>	700	81.6	8	694	82.3	704	81.1	<u>694</u>	<u>82.3</u>
436.cactusADM	8	1088	87.9	1087	87.9	<u>1088</u>	<u>87.9</u>	8	1088	87.9	1087	87.9	<u>1088</u>	<u>87.9</u>
437.leslie3d	8	<u>1900</u>	<u>39.6</u>	1897	39.6	1901	39.6	4	893	42.1	<u>894</u>	<u>42.1</u>	894	42.0
444.namd	8	816	78.6	<u>823</u>	<u>78.0</u>	824	77.8	8	810	79.3	<u>806</u>	<u>79.6</u>	805	79.7
447.dealII	8	726	126	696	132	<u>723</u>	<u>127</u>	8	674	136	<u>682</u>	<u>134</u>	695	132
450.soplex	8	1468	45.4	1461	45.7	<u>1464</u>	<u>45.6</u>	4	<u>672</u>	<u>49.7</u>	669	49.8	673	49.6
453.povray	8	<u>389</u>	<u>109</u>	389	109	392	109	8	315	135	314	136	<u>315</u>	<u>135</u>
454.calculix	8	633	104	635	104	<u>635</u>	<u>104</u>	8	633	104	635	104	<u>635</u>	<u>104</u>
459.GemsFDTD	8	2230	38.1	2235	38.0	<u>2233</u>	<u>38.0</u>	4	1097	38.7	<u>1097</u>	<u>38.7</u>	1097	38.7
465.tonto	8	910	86.5	<u>919</u>	<u>85.7</u>	921	85.4	8	868	90.7	861	91.4	<u>867</u>	<u>90.7</u>
470.lbm	8	2921	37.6	<u>2921</u>	<u>37.6</u>	2921	37.6	4	1400	39.3	<u>1401</u>	<u>39.2</u>	1401	39.2
481.wrf	8	1185	75.4	<u>1183</u>	<u>75.6</u>	1182	75.6	8	1185	75.4	<u>1183</u>	<u>75.6</u>	1182	75.6
482.sphinx3	8	2302	67.7	<u>2305</u>	<u>67.6</u>	2305	67.6	8	<u>2169</u>	<u>71.9</u>	2169	71.9	2168	71.9

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 LX103.  
The Servidor Itautec LX113, the Servidor Itautec LX114 and the Servidor Itautec LX103 are electronically equivalent.



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Servidor Itaotec LX103 (Intel Xeon X3440)

SPECfp\_rate\_base2006 = 70.2

CPU2006 license: 9001  
Test sponsor: Itaotec  
Tested by: Itaotec

Test date: Jul-2010  
Hardware Availability: Dec-2009  
Software Availability: Apr-2010

## 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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## 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) -static(pass 2) -prof-use(pass 2)  
-fno-alias -opt-prefetch

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

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## Peak Optimization Flags (Continued)

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: 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)  
-unroll2 -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)  
-unroll4 -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

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## Peak Optimization Flags (Continued)

481.wrf: basepeak = yes

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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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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