



# SPEC® CFP2006 Result

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## Itaotec

### SPECfp®\_rate2006 = 65.1

### Servidor Itaotec LX201 (Intel Xeon E5410)

### SPECfp\_rate\_base2006 = 59.0

CPU2006 license: 9001

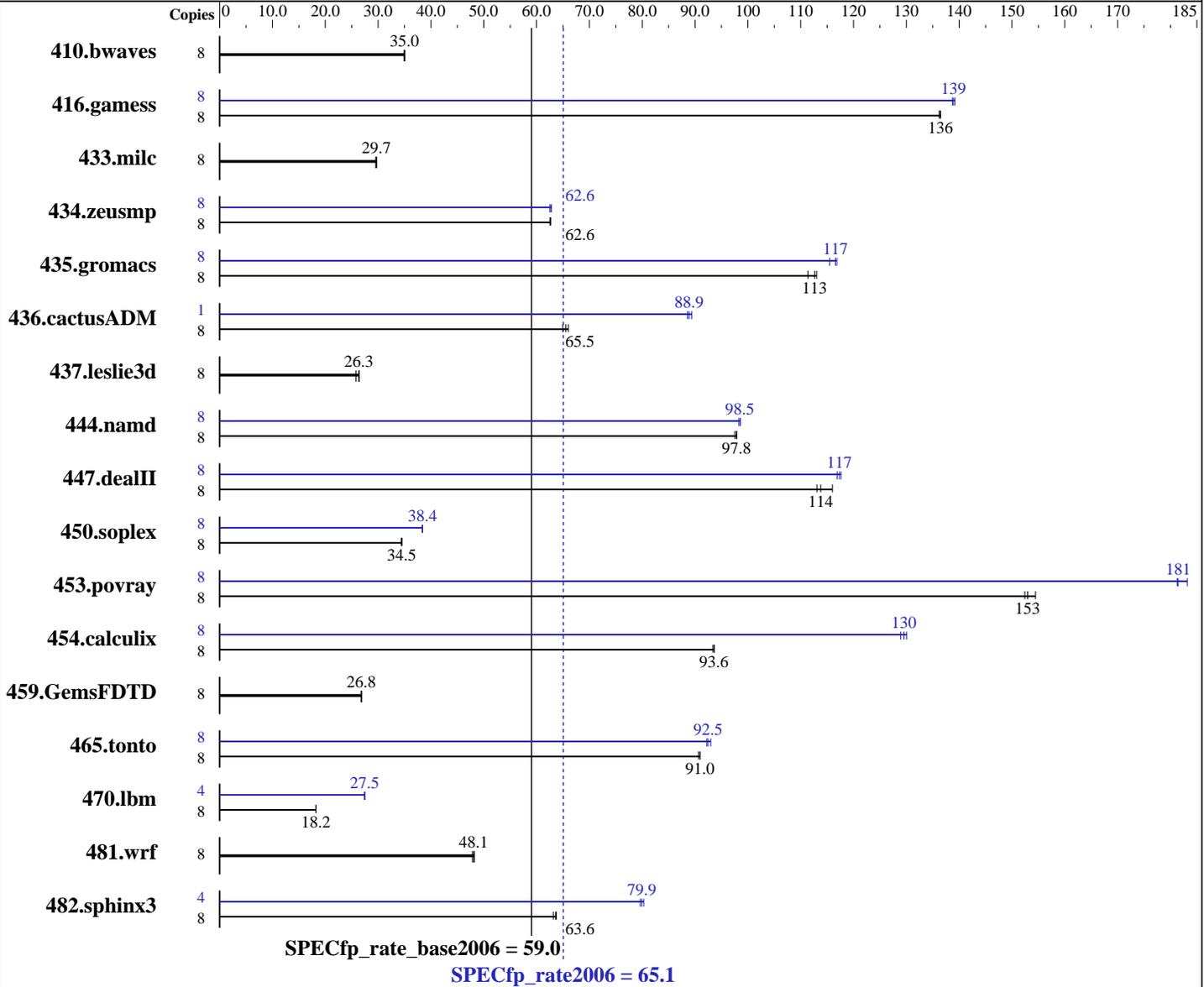
Test date: Apr-2008

Test sponsor: Itaotec

Hardware Availability: Dec-2007

Tested by: Itaotec

Software Availability: Jan-2008



#### Hardware

CPU Name: Intel Xeon E5410  
 CPU Characteristics:  
 CPU MHz: 2330  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

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#### Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP1, Kernel 2.6.16.46-0.12-smp  
 Compiler: Intel C++ and Fortran Compiler for Linux version 10.1 Build 20080112 Package ID: l\_cc\_p\_10.1.012, l\_fc\_p\_10.1.012  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Run Level 3 (multi-user)

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L3 Cache: None  
Other Cache: None  
Memory: 8 GB (8 \* 1 GB PC2-5300 FBDIMM, CL-5-5-5, ECC)  
Disk Subsystem: 1 x SATA-2, 160GB, 7200 RPM  
Other Hardware: None

Base Pointers: 64-bit  
Peak Pointers: 32/64-bit  
Other Software: Binutils 2.17.10.50

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3101	35.1	3114	34.9	<b>3108</b>	<b>35.0</b>	8	3101	35.1	3114	34.9	<b>3108</b>	<b>35.0</b>
416.gamess	8	1148	136	<b>1148</b>	<b>136</b>	1150	136	8	<b>1127</b>	<b>139</b>	1129	139	1125	139
433.milc	8	2486	29.5	2472	29.7	<b>2476</b>	<b>29.7</b>	8	2486	29.5	2472	29.7	<b>2476</b>	<b>29.7</b>
434.zeusmp	8	<b>1163</b>	<b>62.6</b>	1161	62.7	1164	62.6	8	1159	62.8	1164	62.5	<b>1164</b>	<b>62.6</b>
435.gromacs	8	513	111	505	113	<b>507</b>	<b>113</b>	8	489	117	<b>490</b>	<b>117</b>	495	115
436.cactusADM	8	1472	65.0	1448	66.0	<b>1459</b>	<b>65.5</b>	1	135	88.6	<b>134</b>	<b>88.9</b>	134	89.4
437.leslie3d	8	2912	25.8	<b>2854</b>	<b>26.3</b>	2846	26.4	8	2912	25.8	<b>2854</b>	<b>26.3</b>	2846	26.4
444.namd	8	658	97.5	655	97.9	<b>656</b>	<b>97.8</b>	8	651	98.6	653	98.3	<b>651</b>	<b>98.5</b>
447.dealII	8	789	116	809	113	<b>804</b>	<b>114</b>	8	778	118	<b>780</b>	<b>117</b>	783	117
450.soplex	8	1931	34.5	1940	34.4	<b>1936</b>	<b>34.5</b>	8	1737	38.4	1740	38.3	<b>1737</b>	<b>38.4</b>
453.povray	8	<b>278</b>	<b>153</b>	276	154	279	152	8	232	183	<b>235</b>	<b>181</b>	235	181
454.calculix	8	<b>705</b>	<b>93.6</b>	707	93.4	705	93.6	8	507	130	<b>509</b>	<b>130</b>	512	129
459.GemsFDTD	8	3157	26.9	3167	26.8	<b>3163</b>	<b>26.8</b>	8	3157	26.9	3167	26.8	<b>3163</b>	<b>26.8</b>
465.tonto	8	<b>866</b>	<b>91.0</b>	868	90.7	865	91.0	8	853	92.2	847	93.0	<b>851</b>	<b>92.5</b>
470.lbm	8	<b>6031</b>	<b>18.2</b>	6031	18.2	6032	18.2	4	2003	27.4	2001	27.5	<b>2001</b>	<b>27.5</b>
481.wrf	8	1854	48.2	<b>1859</b>	<b>48.1</b>	1867	47.9	8	1854	48.2	<b>1859</b>	<b>48.1</b>	1867	47.9
482.sphinx3	8	<b>2451</b>	<b>63.6</b>	2446	63.7	2467	63.2	4	<b>976</b>	<b>79.9</b>	971	80.3	979	79.6

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

## Compiler Invocation Notes

OMP\_NUM\_THREADS set to number of cores  
KMP\_STACK\_SIZE set to 64M  
KMP\_AFFINITY set to physical,0

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run.  
'/usr/bin/taskset' used to bind benchmark copies to processors, except for 436.cactusADM at peak.



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Tested by: Itaotec

Test date: Apr-2008  
Hardware Availability: Dec-2007  
Software Availability: Jan-2008

## Platform Notes

BIOS configuration:  
Hardware Prefetch Disabled

## 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.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:  
-fast  
  
C++ benchmarks:  
-fast

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Tested by: Itaotec

Test date: Apr-2008  
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Software Availability: Jan-2008

## Base Optimization Flags (Continued)

Fortran benchmarks:  
-fast

Benchmarks using both Fortran and C:  
-fast

## Peak Compiler Invocation

C benchmarks (except as noted below):

```
/opt/intel/cc/10.1.012/bin/icc -L/opt/intel/cc/10.1.012/lib  
-I/opt/intel/cc/10.1.012/include
```

433.milc: icc

C++ benchmarks (except as noted below):

icpc

```
450.soplex: /opt/intel/cc/10.1.012/bin/icpc -L/opt/intel/cc/10.1.012/lib  
-I/opt/intel/cc/10.1.012/include
```

Fortran benchmarks:

ifort

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  
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  
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
```



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Itautec

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SPECfp\_rate\_base2006 = 59.0

CPU2006 license: 9001

Test sponsor: Itautec

Tested by: Itautec

Test date: Apr-2008

Hardware Availability: Dec-2007

Software Availability: Jan-2008

## Peak Optimization Flags

### C benchmarks:

433.milc: basepeak = yes

470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-scalar-rep- -prefetch -opt-malloc-options=3

482.sphinx3: -fast -unroll2

### C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias  
-auto-ilp32

447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast  
-opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4  
-ansi-alias

### Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0  
-ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

### Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch  
-auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-prefetch -parallel -auto-ilp32

454.calculix: -fast -unroll-aggressive -auto-ilp32

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-ic10.1-FP-intel64-linux-flags.20090713.00.html>

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

<http://www.spec.org/cpu2006/flags/Itautec-ic10.1-FP-intel64-linux-flags.20090713.00.xml>

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

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