



SPEC® CFP2006 Result

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Itaotec

SPECfp®_rate2006 = 59.4

Servidor Itaotec LX211 (Intel Xeon E5405)

SPECfp_rate_base2006 = 54.5

CPU2006 license: 9001

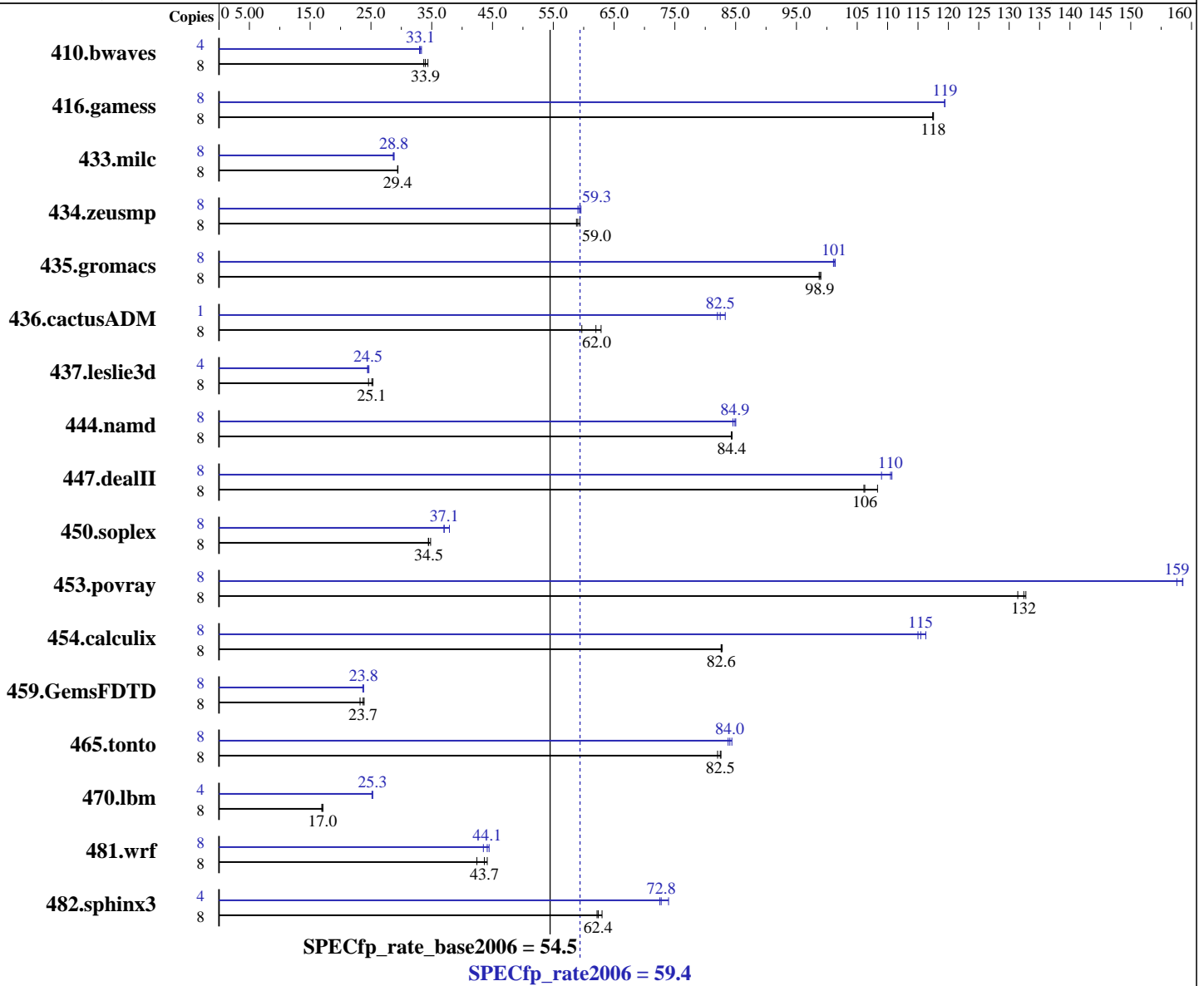
Test date: Mar-2008

Test sponsor: Itaotec

Hardware Availability: Dec-2007

Tested by: Itaotec

Software Availability: Jan-2008



Hardware

CPU Name: Intel Xeon E5405
 CPU Characteristics: 2000
 CPU MHz: Integrated
 FPU: 8 cores, 2 chips, 4 cores/chip
 CPU(s) enabled: 1,2 chips
 CPU(s) orderable: 32 KB I + 32 KB D on chip per core
 Primary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores
 Secondary Cache:

Continued on next page

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 10.1 for Linux 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)
 Base Pointers: 64-bit

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L3 Cache: None
Other Cache: None
Memory: 12 GB (6 * 2 GB PC2-5300 FBDIMM, CL-5-5-5, ECC)
Disk Subsystem: 1 x SCSI, 73GB, 15000 RPM
Other Hardware: None

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	3227	33.7	3163	34.4	3203	33.9	4	1648	33.0	1640	33.1	1632	33.3
416.gamess	8	1333	118	1332	118	1334	117	8	1312	119	1312	119	1311	119
433.milc	8	2494	29.4	2498	29.4	2498	29.4	8	2553	28.8	2562	28.7	2549	28.8
434.zeusmp	8	1238	58.8	1226	59.4	1233	59.0	8	1227	59.3	1222	59.6	1233	59.1
435.gromacs	8	577	99.0	579	98.7	578	98.9	8	563	101	565	101	565	101
436.cactusADM	8	1601	59.7	1542	62.0	1521	62.9	1	143	83.3	145	82.5	146	82.0
437.leslie3d	8	2992	25.1	2970	25.3	3057	24.6	4	1539	24.4	1524	24.7	1533	24.5
444.namd	8	761	84.4	761	84.3	760	84.4	8	759	84.6	756	84.9	755	85.0
447.dealII	8	863	106	861	106	845	108	8	827	111	828	110	840	109
450.soplex	8	1937	34.4	1916	34.8	1934	34.5	8	1802	37.0	1801	37.1	1760	37.9
453.povray	8	324	131	321	132	321	133	8	269	159	268	159	270	158
454.calculix	8	799	82.6	799	82.6	797	82.8	8	568	116	574	115	572	115
459.GemsFDTD	8	3658	23.2	3581	23.7	3555	23.9	8	3570	23.8	3569	23.8	3588	23.7
465.tonto	8	953	82.6	960	82.0	955	82.5	8	940	83.8	937	84.0	933	84.4
470.lbm	8	6431	17.1	6453	17.0	6500	16.9	4	2175	25.3	2184	25.2	2174	25.3
481.wrf	8	2106	42.4	2047	43.7	2025	44.1	8	2054	43.5	2011	44.4	2025	44.1
482.sphinx3	8	2507	62.2	2474	63.0	2499	62.4	4	1075	72.5	1072	72.8	1054	74.0

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.



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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.deallI: -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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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 (except as noted below):

ifort

```
437.leslie3d: /opt/intel/fc/10.1.012/bin/ifort -L/opt/intel/fc/10.1.012/lib  
-I/opt/intel/fc/10.1.012/include
```

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  
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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Peak Optimization Flags

C benchmarks:

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

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: -fast -prefetch

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

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-prefetch

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

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Peak Optimization Flags (Continued)

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

481.wrf: -fast -auto-ilp32

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.

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