



SPEC® CFP2006 Result

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Itautec

SPECfp®_rate2006 = 75.1

Servidor Itautec MX201 (Intel Xeon E5440)

SPECfp_rate_base2006 = 67.8

CPU2006 license: 9001

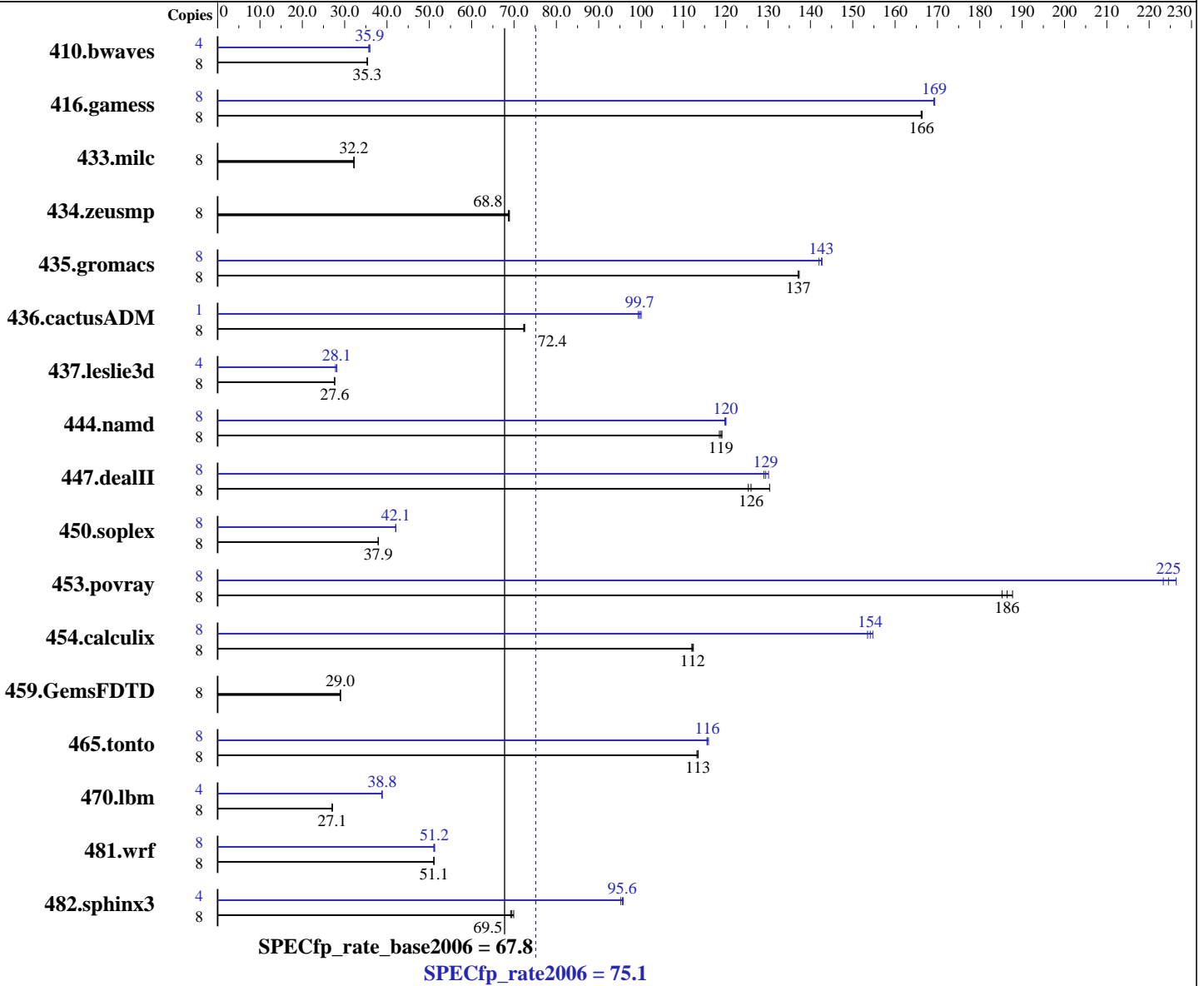
Test date: May-2008

Test sponsor: Itautec

Hardware Availability: Dec-2007

Tested by: Itautec

Software Availability: Jan-2008



Hardware

CPU Name: Intel Xeon E5440
 CPU Characteristics:
 CPU MHz: 2830
 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)

Continued on next page



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L3 Cache: None
Other Cache: None
Memory: 16 GB (8 * 2 GB PC2-5300 FBDIMM, CL-5-5-5, ECC)
Disk Subsystem: 1 x SCSI, 73GB, 15000 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	3077	35.3	3076	35.3	3075	35.4	4	1523	35.7	1513	35.9	1515	35.9
416.gamess	8	942	166	943	166	941	166	8	926	169	925	169	925	169
433.milc	8	2283	32.2	2282	32.2	2278	32.2	8	2283	32.2	2282	32.2	2278	32.2
434.zeusmp	8	1060	68.7	1056	68.9	1058	68.8	8	1060	68.7	1056	68.9	1058	68.8
435.gromacs	8	416	137	417	137	417	137	8	401	143	400	143	402	142
436.cactusADM	8	1323	72.3	1320	72.4	1318	72.5	1	120	99.3	119	100	120	99.7
437.leslie3d	8	2721	27.6	2721	27.6	2724	27.6	4	1350	27.8	1338	28.1	1336	28.1
444.namd	8	540	119	541	119	539	119	8	536	120	535	120	534	120
447.dealII	8	730	125	702	130	726	126	8	707	129	703	130	709	129
450.soplex	8	1758	37.9	1759	37.9	1758	37.9	8	1586	42.1	1584	42.1	1586	42.1
453.povray	8	227	188	230	185	228	186	8	191	223	188	226	190	225
454.calculix	8	587	112	588	112	589	112	8	428	154	427	155	430	153
459.GemsFDTD	8	2932	29.0	2928	29.0	2924	29.0	8	2932	29.0	2928	29.0	2924	29.0
465.tonto	8	694	113	695	113	694	113	8	681	116	681	116	679	116
470.lbm	8	4060	27.1	4060	27.1	4060	27.1	4	1415	38.8	1414	38.9	1417	38.8
481.wrf	8	1747	51.2	1748	51.1	1751	51.0	8	1750	51.0	1744	51.2	1746	51.2
482.sphinx3	8	2230	69.9	2253	69.2	2244	69.5	4	814	95.8	816	95.6	819	95.2

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' is used to bind benchmark copies to processor, except for 436.cactusADM at peak.



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Platform Notes

BIOS configuration:
Hardware Prefetch Disabled

General Notes

This result was measured on the Servidor Itaotec MX201.
The Servidor Itaotec MX201 and the Servidor Itaotec MX221 are electronically equivalent.

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



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Base Optimization Flags

C benchmarks:
-fast

C++ benchmarks:
-fast

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

Continued on next page



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Peak Portability Flags (Continued)

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

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.dealIII: -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: basepeak = yes
437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-opt-malloc-options=3
459.GemsFDTD: basepeak = yes
465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

Continued on next page



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Peak Optimization Flags (Continued)

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: -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.20090714.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.20090714.xml>

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For other inquiries, please contact webmaster@spec.org.

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