SPEC® CFP2006 Result
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Itautec

Servidor Itautec MX223 (Intel Xeon X5675)

$SPECfp^®_rate2006 = $ 267

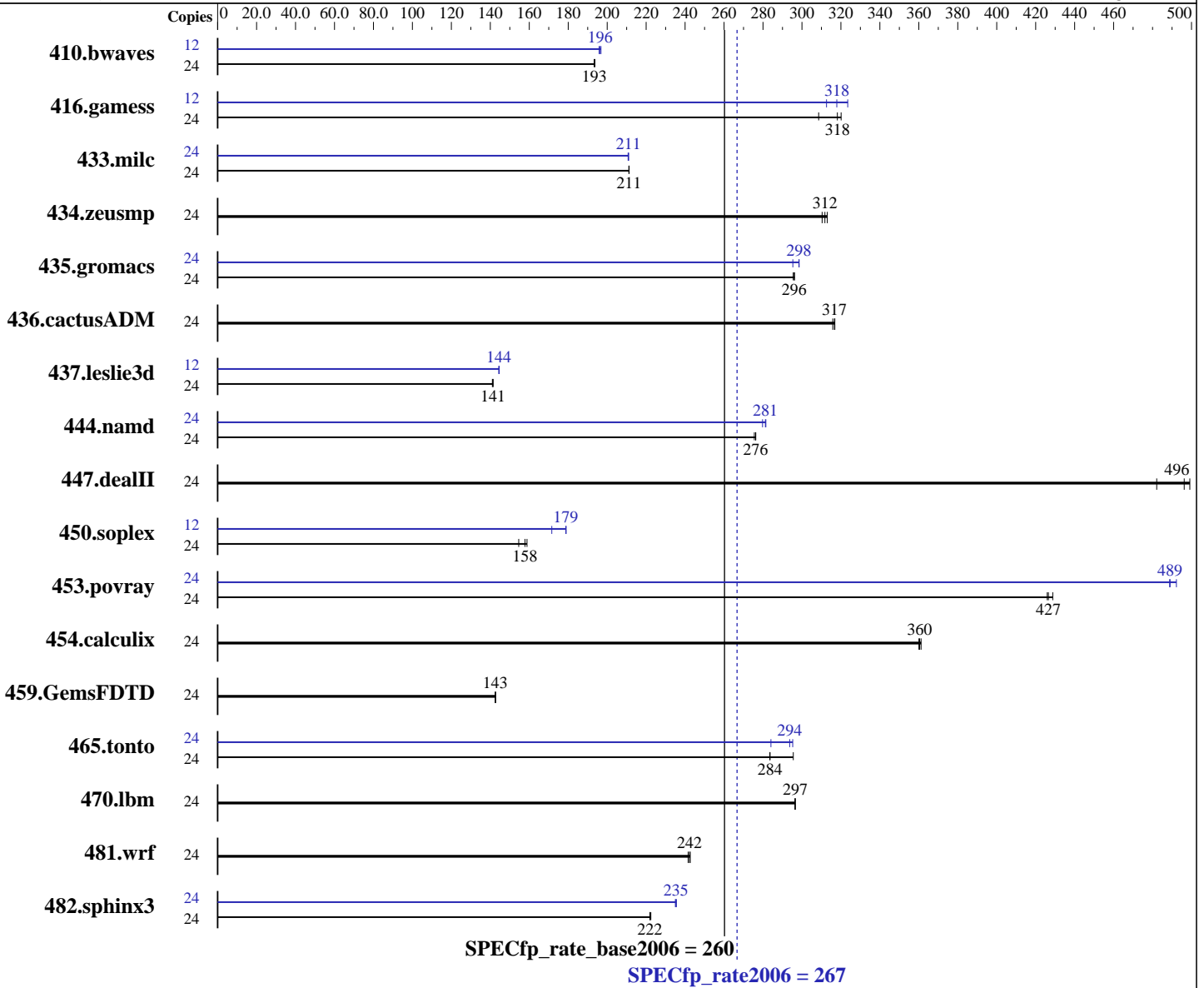$SPECfp_rate_base2006 = $ 260

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

Test date: Nov-2011
Hardware Availability: Jul-2011
Software Availability: Aug-2011

Results chart (Copies scale 0 to 500):

- **410.bwaves** — 12: 196; 24: 193
- **416.gamess** — 12: 318; 24: 318
- **433.milc** — 24: 211; 24: 211
- **434.zeusmp** — 24: 312
- **435.gromacs** — 24: 298; 24: 296
- **436.cactusADM** — 24: 317
- **437.leslie3d** — 12: 144; 24: 141
- **444.namd** — 24: 281; 24: 276
- **447.dealII** — 24: 496
- **450.soplex** — 12: 179; 24: 158
- **453.povray** — 24: 489; 24: 427
- **454.calculix** — 24: 360
- **459.GemsFDTD** — 24: 143
- **465.tonto** — 24: 294; 24: 284
- **470.lbm** — 24: 297
- **481.wrf** — 24: 242
- **482.sphinx3** — 24: 235; 24: 222

SPECfp_rate_base2006 = 260
SPECfp_rate2006 = 267

Hardware

CPU Name:	Intel Xeon X5675
CPU Characteristics:	Intel Turbo Boost Technology up to 3.46 GHz
CPU MHz:	3067
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 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

Continued on next page

Software

Operating System:	SUSE Linux Enterprise Server 11 SP1 (x86_64), Kernel 2.6.32.12-0.7-default
Compiler:	C/C++/Fortran: Version 12.1.0 of Intel Compiler XE Build 20110811
Auto Parallel:	No
File System:	ext3
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	32/64-bit

Continued on next page

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L3 Cache:	12 MB I+D on chip per chip	Other Software: None
Other Cache:	None	
Memory:	48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)	
Disk Subsystem:	1 x 500 GB SAS, 15000 RPM	
Other Hardware:	None	

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	24	1684	194	**1686**	**193**	1687	193	12	829	197	**830**	**196**	833	196
416.gamess	24	1523	309	**1477**	**318**	1468	320	12	752	313	**739**	**318**	726	324
433.milc	24	1043	211	**1043**	**211**	1043	211	24	1045	211	1044	211	**1044**	**211**
434.zeusmp	24	**700**	**312**	704	310	698	313	24	**700**	**312**	704	310	698	313
435.gromacs	24	579	296	**579**	**296**	580	296	24	574	299	**574**	**298**	580	295
436.cactusADM	24	905	317	**906**	**317**	908	316	24	905	317	**906**	**317**	908	316
437.leslie3d	24	1595	141	1599	141	**1596**	**141**	12	**781**	**144**	781	144	780	145
444.namd	24	697	276	**697**	**276**	699	276	24	684	281	688	280	**684**	**281**
447.dealII	24	**553**	**496**	550	499	569	482	24	**553**	**496**	550	499	569	482
450.soplex	24	1260	159	1295	155	**1268**	**158**	12	583	172	559	179	**560**	**179**
453.povray	24	300	426	**299**	**427**	298	429	24	259	492	**261**	**489**	261	489
454.calculix	24	548	361	550	360	**549**	**360**	24	548	361	550	360	**549**	**360**
459.GemsFDTD	24	1786	143	**1786**	**143**	1784	143	24	1786	143	**1786**	**143**	1784	143
465.tonto	24	833	284	799	296	**833**	**284**	24	800	295	**804**	**294**	831	284
470.lbm	24	1112	297	**1112**	**297**	1113	296	24	1112	297	**1112**	**297**	1113	296
481.wrf	24	1105	243	**1107**	**242**	1110	242	24	1105	243	**1107**	**242**	1110	242
482.sphinx3	24	2103	222	**2107**	**222**	2107	222	24	1986	236	1990	235	**1988**	**235**

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.
     Large pages were not enabled for this run

Platform Notes

    Data Reuse disabled in BIOS.

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General Notes

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

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 -ansi-alias

C++ benchmarks:
    -xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias

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Base Optimization Flags (Continued)

Fortran benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static
```

Benchmarks using both Fortran and C:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias
```

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`

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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) -prof-use(pass 2) -static -auto-ilp32

     470.lbm: basepeak = yes

    482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2

C++ benchmarks:

    444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -prof-use(pass 2) -fno-alias
              -auto-ilp32

    447.dealII: basepeak = yes

    450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                -no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3
                -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

    453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias
                -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Fortran benchmarks:

    410.bwaves: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                -no-prec-div(pass 2) -prof-use(pass 2) -static

    416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                -no-prec-div(pass 2) -prof-use(pass 2) -unroll2
                -inline-level=0 -scalar-rep- -static

    434.zeusmp: basepeak = yes

    437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div
                  -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

  459.GemsFDTD: basepeak = yes

     465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto
                -inline-calloc -opt-malloc-options=3
                -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

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) -prof-use(pass 2) -opt-prefetch
                 -static -auto-ilp32

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Peak Optimization Flags (Continued)

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Itautec-Intel-Linux64-Platform.html
http://www.spec.org/cpu2006/flags/Intel-ic12.1-linux64.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Itautec-Intel-Linux64-Platform.xml
http://www.spec.org/cpu2006/flags/Intel-ic12.1-linux64.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
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