SPEC® CFP2006 Result
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Itautec

Servidor Itautec MX214 (Intel Xeon E5649)

$SPECfp®\_rate2006 = 119$

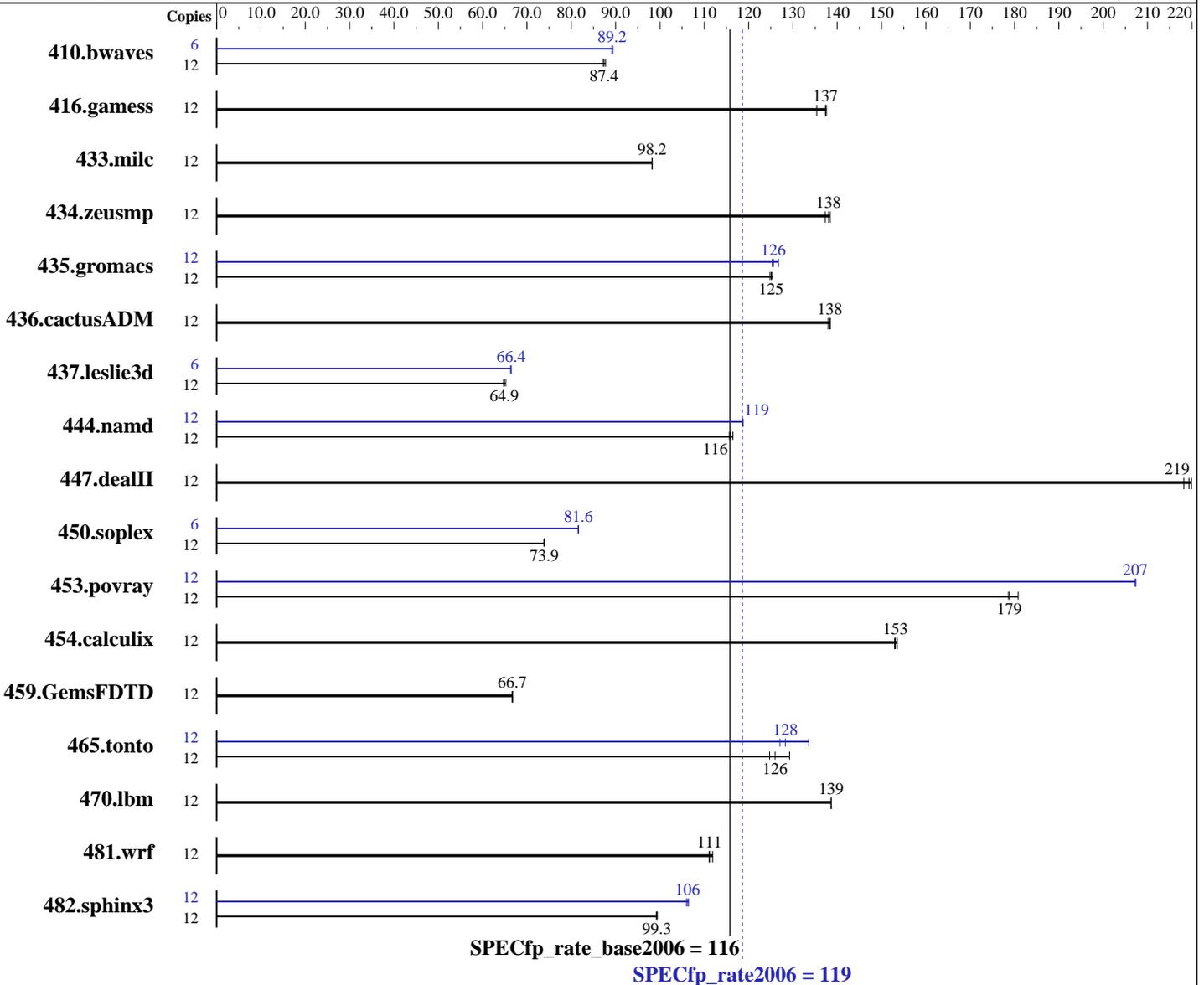$SPECfp\_rate\_base2006 = 116$

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

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

Benchmark	Copies	Result
410.bwaves	6	89.2
	12	87.4
416.gamess	12	137
433.milc	12	98.2
434.zeusmp	12	138
435.gromacs	12	126
	12	125
436.cactusADM	12	138
437.leslie3d	6	66.4
	12	64.9
444.namd	12	119
	12	116
447.dealII	12	219
450.soplex	6	81.6
	12	73.9
453.povray	12	207
	12	179
454.calculix	12	153
459.GemsFDTD	12	66.7
465.tonto	12	128
	12	126
470.lbm	12	139
481.wrf	12	111
482.sphinx3	12	106
	12	99.3

SPECfp_rate_base2006 = 116

SPECfp_rate2006 = 119

Hardware

CPU Name: Intel Xeon E5649
CPU Characteristics: Intel Turbo Boost Technology up to 2.93 GHz
CPU MHz: 2533
FPU: Integrated
CPU(s) enabled: 6 cores, 1 chip, 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

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L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 24 GB (6 x 4 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 1 x 500 GB SAS, 15000 RPM
Other Hardware: None

Other Software: None

Results Table

| Benchmark | Base | | | | | | Peak | | | | | | |
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	12	1859	87.7	**1866**	**87.4**	1870	87.2	6	915	89.1	912	89.4	**914**	**89.2**
416.gamess	12	1708	138	**1711**	**137**	1736	135	12	1708	138	**1711**	**137**	1736	135
433.milc	12	1121	98.3	**1122**	**98.2**	1122	98.2	12	1121	98.3	**1122**	**98.2**	1122	98.2
434.zeusmp	12	796	137	**791**	**138**	789	138	12	796	137	**791**	**138**	789	138
435.gromacs	12	683	125	**685**	**125**	686	125	12	684	125	**682**	**126**	676	127
436.cactusADM	12	**1037**	**138**	1036	138	1040	138	12	**1037**	**138**	1036	138	1040	138
437.leslie3d	12	1744	64.7	**1738**	**64.9**	1730	65.2	6	850	66.3	**849**	**66.4**	849	66.4
444.namd	12	**830**	**116**	832	116	826	116	12	**811**	**119**	812	119	810	119
447.dealII	12	624	220	629	218	**626**	**219**	12	624	220	629	218	**626**	**219**
450.soplex	12	1354	73.9	1355	73.9	**1354**	**73.9**	6	**613**	**81.6**	613	81.6	613	81.6
453.povray	12	357	179	353	181	**357**	**179**	12	**308**	**207**	308	207	308	207
454.calculix	12	647	153	**646**	**153**	645	154	12	647	153	**646**	**153**	645	154
459.GemsFDTD	12	**1908**	**66.7**	1909	66.7	1908	66.7	12	**1908**	**66.7**	1909	66.7	1908	66.7
465.tonto	12	914	129	**937**	**126**	947	125	12	**921**	**128**	884	134	929	127
470.lbm	12	1189	139	1190	139	**1189**	**139**	12	1189	139	1190	139	**1189**	**139**
481.wrf	12	1206	111	**1206**	**111**	1198	112	12	1206	111	**1206**	**111**	1198	112
482.sphinx3	12	2353	99.4	**2356**	**99.3**	2357	99.2	12	2197	106	**2202**	**106**	2207	106

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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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

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

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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: `basepeak = yes`

    470.lbm: `basepeak = yes`

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

C++ benchmarks:

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Peak Optimization Flags (Continued)

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: basepeak = yes

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

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

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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.

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