



# SPEC® CFP2006 Result

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Incom S.A.

SPECfp®2006 = 30.9

ADAX NetOfficePro X5530R500

SPECfp\_base2006 = 29.8

CPU2006 license: 9025

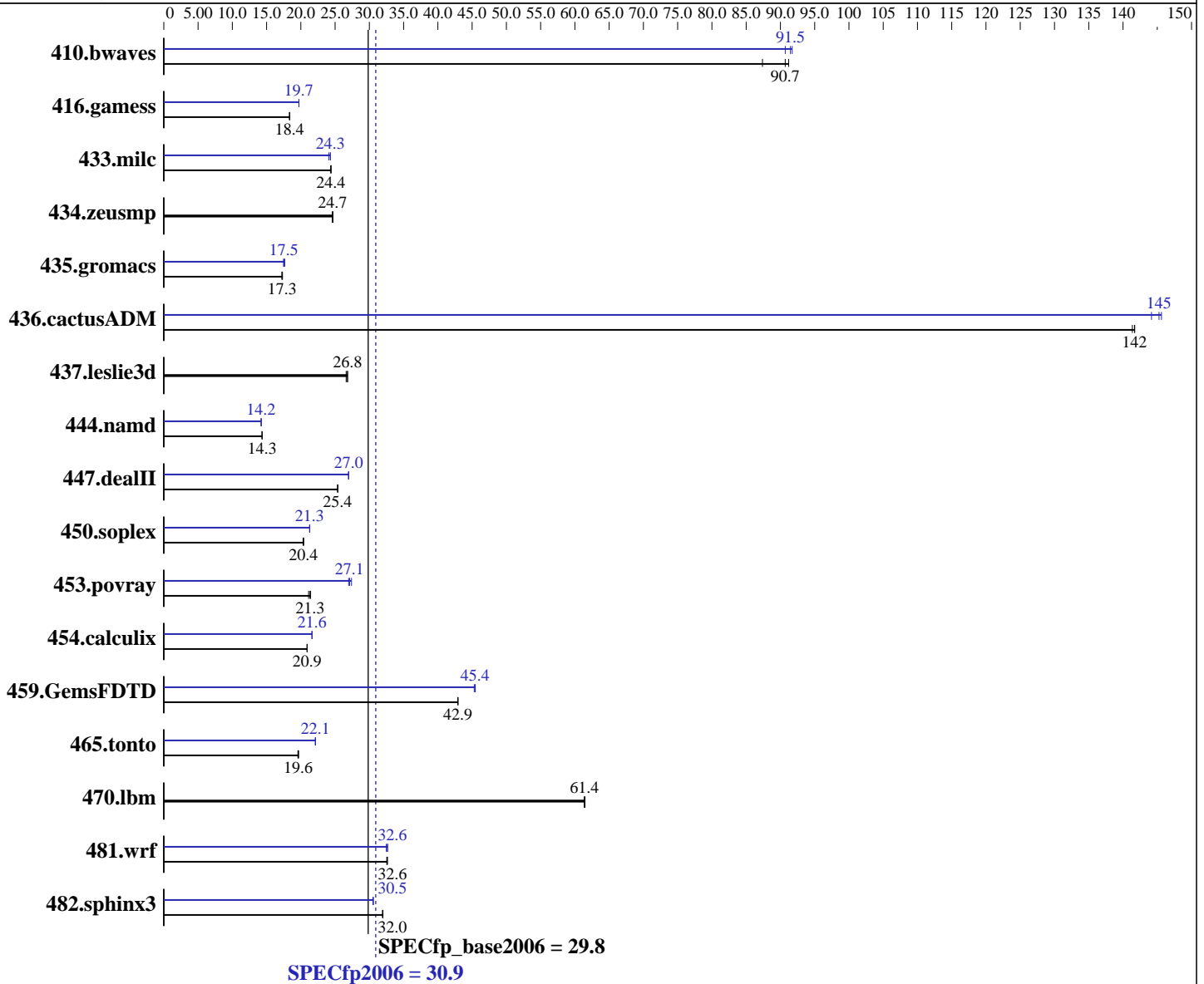
Test date: Mar-2010

Test sponsor: Incom S.A.

Hardware Availability: Apr-2009

Tested by: Incom S.A.

Software Availability: Feb-2009



## Hardware

CPU Name: Intel Xeon E5530  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.67 GHz  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 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

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## Software

Operating System: SuSe Linux Enterprise Server 10 (x86\_64) SP2, kernel 2.6.16.60-0.21-smp  
 Compiler: Intel C++ and Fortran Compiler 11.0 for Linux Build 20090131 Package ID: I\_cproc\_p\_11.0.080, I\_cprof\_p\_11.0.080  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit

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L3 Cache: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 32 GB (8x4 GB PC3 10600R, 2 rank, ECC, running at 1066 MHz)  
Disk Subsystem: 1 x 500 GB SATA, 7200RPM  
Other Hardware: None

Peak Pointers: 32/64-bit  
Other Software: Binutils 2.18.50.0.7.20080502

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	156	87.4	149	91.2	<b>150</b>	<b>90.7</b>	150	90.7	<b>149</b>	<b>91.5</b>	148	91.7
416.gamess	<b>1067</b>	<b>18.4</b>	1068	18.3	1065	18.4	992	19.7	993	19.7	<b>993</b>	<b>19.7</b>
433.milc	376	24.4	377	24.4	<b>376</b>	<b>24.4</b>	381	24.1	<b>378</b>	<b>24.3</b>	378	24.3
434.zeusmp	369	24.7	370	24.6	<b>369</b>	<b>24.7</b>	369	24.7	370	24.6	<b>369</b>	<b>24.7</b>
435.gromacs	<b>413</b>	<b>17.3</b>	414	17.2	412	17.3	<b>408</b>	<b>17.5</b>	404	17.7	408	17.5
436.cactusADM	84.3	142	<b>84.3</b>	<b>142</b>	84.5	141	82.9	144	82.1	146	<b>82.3</b>	<b>145</b>
437.leslie3d	351	26.8	<b>351</b>	<b>26.8</b>	353	26.6	351	26.8	<b>351</b>	<b>26.8</b>	353	26.6
444.namd	<b>559</b>	<b>14.3</b>	559	14.4	559	14.3	564	14.2	<b>564</b>	<b>14.2</b>	564	14.2
447.dealII	<b>451</b>	<b>25.4</b>	451	25.4	451	25.4	<b>424</b>	<b>27.0</b>	424	27.0	424	27.0
450.soplex	408	20.4	410	20.3	<b>409</b>	<b>20.4</b>	391	21.3	<b>392</b>	<b>21.3</b>	392	21.3
453.povray	252	21.1	<b>249</b>	<b>21.3</b>	248	21.4	197	27.0	<b>196</b>	<b>27.1</b>	194	27.4
454.calculix	394	20.9	395	20.9	<b>394</b>	<b>20.9</b>	<b>381</b>	<b>21.6</b>	381	21.6	381	21.6
459.GemsFDTD	247	42.9	247	42.9	<b>247</b>	<b>42.9</b>	234	45.3	233	45.5	<b>234</b>	<b>45.4</b>
465.tonto	500	19.7	<b>502</b>	<b>19.6</b>	503	19.6	445	22.1	<b>445</b>	<b>22.1</b>	444	22.1
470.lbm	224	61.4	224	61.5	<b>224</b>	<b>61.4</b>	224	61.4	224	61.5	<b>224</b>	<b>61.4</b>
481.wrf	343	32.5	<b>343</b>	<b>32.6</b>	342	32.6	342	32.7	<b>342</b>	<b>32.6</b>	344	32.5
482.sphinx3	609	32.0	<b>610</b>	<b>32.0</b>	611	31.9	639	30.5	<b>638</b>	<b>30.5</b>	637	30.6

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

## General Notes

OMP\_NUM\_THREADS set to number of cores  
KMP\_AFFINITY set to granularity=fine,scatter  
KMP\_STACKSIZE set to 200M

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

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## Base Compiler Invocation (Continued)

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:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Fortran benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

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## Peak Compiler Invocation (Continued)

482.sphinx3: `icc -m32`

C++ benchmarks (except as noted below):

`icpc`

450.soplex: `icpc -m32`

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

## 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) -static(pass 2) -prof-use(pass 2) -fno-alias`

470.lbm: `basepeak = yes`

482.sphinx3: `-xSSE4.2 -ipo -O3 -no-prec-div -static -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) -static(pass 2) -prof-use(pass 2)  
-fno-alias -auto-ilp32

447.dealII: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll2 -ansi-alias -scalar-rep- -opt-prefetch

450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-opt-malloc-options=3

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll4 -ansi-alias

### Fortran benchmarks:

410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch  
-parallel

416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll2 -Ob0 -ansi-alias -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll2 -Ob0 -opt-prefetch -parallel

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll4 -auto

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

436.cactusADM: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll2 -opt-prefetch -parallel -auto-ilp32

454.calculix: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32

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## Peak Optimization Flags (Continued)

```
481.wrf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch
        -parallel -auto-ilp32
```

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20100316.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20100316.xml>

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

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