ACTION S.A.

ACTINA SOLAR 220 X2 (Intel Xeon E5410, 2.0 GHz)

CPU2006 license: 9008
Test sponsor: ACTION S.A.
Tested by: ACTION S.A.

Test date: Dec-2008
Hardware Availability: Sep-2008
Software Availability: Nov-2008

SPECfp_rate2006 = 69.3
SPECfp_rate_base2006 = 63.2

Hardware

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Software

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<th>Operating System:</th>
<th>SuSE Linux Enterprise Server 10 (x86_64) with SP2, kernel 2.6.16.60-0.21-smp</th>
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<td>Intel C++ and Fortran Compiler 11.0 for Linux Build 20080730 Package ID: l_cproc_b_11.0.042, l_fproc_b_11.0.042</td>
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<td>File System:</td>
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<td>System State:</td>
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<td>Base Pointers:</td>
<td>64-bit</td>
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</tbody>
</table>

Continued on next page
SPEC CFP2006 Result

ACTION S.A.

ACTINA SOLAR 220 X2 (Intel Xeon E5410, 2.0 GHz)

CPU2006 license: 9008
Test sponsor: ACTION S.A.
Tested by: ACTION S.A.

L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB, PC2-5300, CL 5-5-5, FB ECC)
Disk Subsystem: 500 GB SATA, 7200 RPM
Other Hardware: None
Peak Pointers: 32/64-bit
Other Software: Binutils 2.18.50.0.7.200802

Results Table

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</table>

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.

General Notes

Taskset was used to bind processes to cores except for 436.cactusADM peak
OMP_NUM_THREADS set to number of processors
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 64M
ACTION S.A.  
ACTINA SOLAR 220 X2 (Intel Xeon E5410, 2.0 GHz)  

<table>
<thead>
<tr>
<th>SPECfp_rate2006 = 69.3</th>
<th>SPECfp_rate_base2006 = 63.2</th>
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<td>CPU2006 license: 9008</td>
<td>Test date: Dec-2008</td>
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<td>Hardware Availability: Sep-2008</td>
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<tr>
<td>Tested by: ACTION S.A.</td>
<td>Software Availability: Nov-2008</td>
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**Base Compiler Invocation**

- C benchmarks: `icc`
- C++ benchmarks: `icpc`
- Fortran benchmarks: `ifort`
- Benchmarks using both Fortran and C: `icc ifort`

**Base Portability Flags**

```plaintext
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: `-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch`
- C++ benchmarks: `-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch`
- Fortran benchmarks: `-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch`
- Benchmarks using both Fortran and C: `-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch`
Peak Compiler Invocation

C benchmarks (except as noted below):

```bash
icc
482.sphinx3: /opt/intel/Compiler/11.0/042/bin/ia32/icc
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include
```

C++ benchmarks (except as noted below):

```bash
icpc
450.soplex: /opt/intel/Compiler/11.0/042/bin/ia32/icpc
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include
```

Fortran benchmarks (except as noted below):

```bash
ifort
437.leslie3d: /opt/intel/Compiler/11.0/042/bin/ia32/ifort
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include
```

Benchmarks using both Fortran and C:

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

Peak Optimization Flags

C benchmarks:

Continued on next page
Peak Optimization Flags (Continued)

433.milc: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
- no-prec-div - static - fno-alias

470.lbm: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
- auto-ilp32

482.sphinx3: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2

C++ benchmarks:

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

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

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

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

Fortran benchmarks:

410.bwaves: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

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

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

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
- no-prec-div -static -opt-malloc-options=3 -opt-prefetch

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

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

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
- no-prec-div -static -opt-prefetch -auto-ilp32

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

**ACTINA SOLAR 220 X2 (Intel Xeon E5410, 2.0 GHz)**

<table>
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<tr>
<th>SPECfp_rate2006 =</th>
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<td>SPECfp_rate_base2006 =</td>
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**CPU2006 license:** 9008  
**Test date:** Dec-2008  
**Test sponsor:** ACTION S.A.  
**Hardware Availability:** Sep-2008  
**Tested by:** ACTION S.A.  
**Software Availability:** Nov-2008

### Peak Optimization Flags (Continued)

- 454.calculix: `-xSSE4.1 -ipo -O3 -no-prec-div -static -auto-ilp32`
- 481.wrf: `basepeak = yes`

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


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


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

Tested with SPEC CPU2006 v1.1.