



# SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## ACTION S.A.

SPECfp®\_rate2006 = 154

ACTINA SOLAR 200 X5 (Intel Xeon E5-2603)

SPECfp\_rate\_base2006 = 178

CPU2006 license: 9008

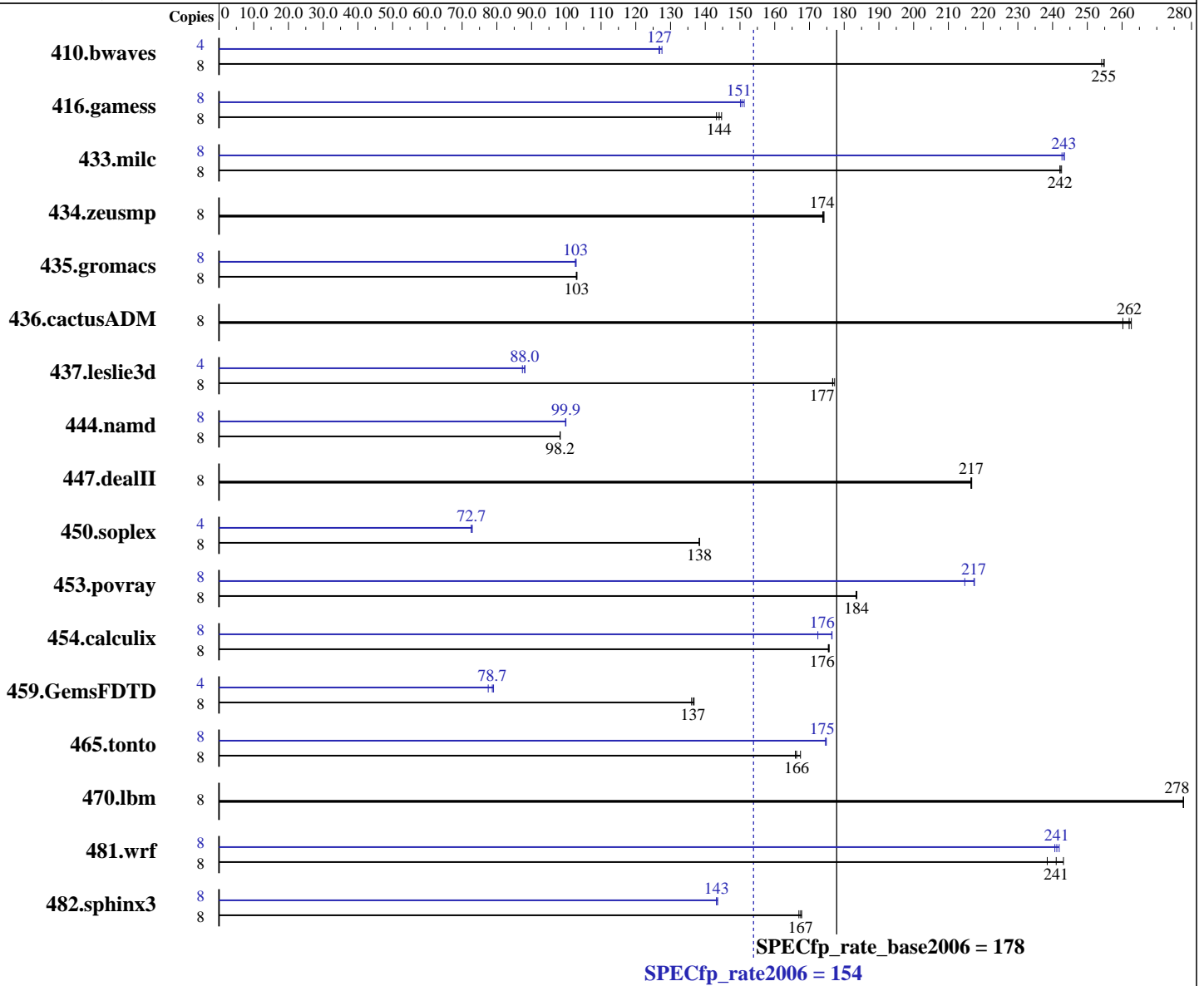
Test sponsor: ACTION S.A.

Tested by: ACTION S.A.

Test date: Jan-2013

Hardware Availability: Mar-2012

Software Availability: Feb-2012



### Hardware

CPU Name: Intel Xeon E5-2603  
 CPU Characteristics:  
 CPU MHz: 1800  
 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: 256 KB I+D on chip per core

Continued on next page

### Software

Operating System: SUSE Linux Enterprise Server 11 SP2 (x86\_64) 3.0.13-0.27-default  
 Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux;  
 Fortran: Version 12.1.0.225 of Intel Fortran Studio XE for Linux  
 Auto Parallel: No  
 File System: ext3  
 System State: Run level 3 (multi-user)

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**ACTION S.A.**

**SPECfp\_rate2006 = 154**

**ACTINA SOLAR 200 X5 (Intel Xeon E5-2603)**

**SPECfp\_rate\_base2006 = 178**

**CPU2006 license:** 9008

**Test date:** Jan-2013

**Test sponsor:** ACTION S.A.

**Hardware Availability:** Mar-2012

**Tested by:** ACTION S.A.

**Software Availability:** Feb-2012

**L3 Cache:** 10 MB I+D on chip per chip  
**Other Cache:** None  
**Memory:** 256 GB (16 x 16 GB 2Rx4 PC3-12800R-11, ECC, running at 1066 MHz and CL7)  
**Disk Subsystem:** 1 x 2 TB SATA, 7200 RPM  
**Other Hardware:** None

**Base Pointers:** 32/64-bit  
**Peak Pointers:** 32/64-bit  
**Other Software:** None

## Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
410.bwaves	8	428	254	427	255	<b>427</b>	<b>255</b>	4	<b>429</b>	<b>127</b>	426	128	429	127		
416.gamess	8	<b>1088</b>	<b>144</b>	1094	143	1082	145	8	1036	151	<b>1040</b>	<b>151</b>	1043	150		
433.milc	8	303	242	303	243	<b>303</b>	<b>242</b>	8	<b>302</b>	<b>243</b>	303	243	302	243		
434.zeusmp	8	<b>418</b>	<b>174</b>	418	174	419	174	8	<b>418</b>	<b>174</b>	418	174	419	174		
435.gromacs	8	555	103	<b>555</b>	<b>103</b>	554	103	8	557	103	555	103	<b>556</b>	<b>103</b>		
436.cactusADM	8	367	260	364	263	<b>365</b>	<b>262</b>	8	367	260	364	263	<b>365</b>	<b>262</b>		
437.leslie3d	8	424	177	426	177	<b>426</b>	<b>177</b>	4	430	87.4	427	88.1	<b>427</b>	<b>88.0</b>		
444.namd	8	653	98.2	<b>653</b>	<b>98.2</b>	653	98.2	8	643	99.7	<b>643</b>	<b>99.9</b>	642	99.9		
447.dealII	8	422	217	423	216	<b>422</b>	<b>217</b>	8	422	217	423	216	<b>422</b>	<b>217</b>		
450.soplex	8	482	138	<b>482</b>	<b>138</b>	483	138	4	<b>459</b>	<b>72.7</b>	457	72.9	459	72.7		
453.povray	8	232	183	232	184	<b>232</b>	<b>184</b>	8	196	218	<b>196</b>	<b>217</b>	198	215		
454.calculix	8	376	176	376	175	<b>376</b>	<b>176</b>	8	374	177	<b>374</b>	<b>176</b>	383	172		
459.GemsFDTD	8	621	137	<b>622</b>	<b>137</b>	624	136	4	<b>539</b>	<b>78.7</b>	548	77.5	537	79.0		
465.tonto	8	470	167	<b>473</b>	<b>166</b>	474	166	8	451	175	450	175	<b>451</b>	<b>175</b>		
470.lbm	8	396	278	396	278	<b>396</b>	<b>278</b>	8	396	278	396	278	<b>396</b>	<b>278</b>		
481.wrf	8	375	238	<b>371</b>	<b>241</b>	368	243	8	371	241	<b>370</b>	<b>241</b>	369	242		
482.sphinx3	8	934	167	<b>931</b>	<b>167</b>	929	168	8	<b>1088</b>	<b>143</b>	1089	143	1086	144		

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

## Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**ACTION S.A.**

**SPECfp\_rate2006 = 154**

**ACTINA SOLAR 200 X5 (Intel Xeon E5-2603)**

**SPECfp\_rate\_base2006 = 178**

**CPU2006 license:** 9008

**Test date:** Jan-2013

**Test sponsor:** ACTION S.A.

**Hardware Availability:** Mar-2012

**Tested by:** ACTION S.A.

**Software Availability:** Feb-2012

## Platform Notes

Sysinfo program /cpu2006.1.2/config/sysinfo.rev6800  
\$Rev: 6800 \$ \$Date:: 2011-10-11 #\$ 6f2ebdff5032aaa42e583f96b07f99d3  
running on SUT Wed Jan 16 19:45:42 2013

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:  
<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

```
From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E5-2603 0 @ 1.80GHz
 2 "physical id"s (chips)
 8 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
caution.)
  cpu cores : 4
  siblings  : 4
  physical 0: cores 0 1 2 3
  physical 1: cores 0 1 2 3
cache size : 10240 KB
```

```
From /proc/meminfo
MemTotal:      264521160 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

```
/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 11 (x86_64)
```

```
From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 11 (x86_64)
VERSION = 11
PATCHLEVEL = 2
```

```
uname -a:
Linux SUT 3.0.13-0.27-default #1 SMP Wed Feb 15 13:33:49 UTC 2012 (d73692b)
x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Jan 16 08:23 last=S
```

```
SPEC is set to: /cpu2006.1.2
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda2       ext3  1.6T   63G  1.5T   5% /
```

Additional information from dmidecode:

(End of data from sysinfo program)



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**ACTION S.A.**

**SPECfp\_rate2006 = 154**

**ACTINA SOLAR 200 X5 (Intel Xeon E5-2603)**

**SPECfp\_rate\_base2006 = 178**

**CPU2006 license:** 9008

**Test date:** Jan-2013

**Test sponsor:** ACTION S.A.

**Hardware Availability:** Mar-2012

**Tested by:** ACTION S.A.

**Software Availability:** Feb-2012

## General Notes

Environment variables set by runspec before the start of the run:  
LD\_LIBRARY\_PATH = "/cpu2006.1.2/libs/32:/cpu2006.1.2/libs/64"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5  
Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/transparent\_hugepage/enabled  
Filesystem page cache cleared with:  
echo 1> /proc/sys/vm/drop\_caches  
runspec command invoked through numactl i.e.:  
numactl --interleave=all runspec <etc>

## 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.deallI: -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



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**ACTION S.A.**

**SPECfp\_rate2006 = 154**

**ACTINA SOLAR 200 X5 (Intel Xeon E5-2603)**

**SPECfp\_rate\_base2006 = 178**

**CPU2006 license:** 9008

**Test date:** Jan-2013

**Test sponsor:** ACTION S.A.

**Hardware Availability:** Mar-2012

**Tested by:** ACTION S.A.

**Software Availability:** Feb-2012

## Base Optimization Flags

C benchmarks:

`-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32  
-ansi-alias -opt-mem-layout-trans=3`

C++ benchmarks:

`-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32  
-ansi-alias -opt-mem-layout-trans=3`

Fortran benchmarks:

`-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch`

Benchmarks using both Fortran and C:

`-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32  
-ansi-alias -opt-mem-layout-trans=3`

## 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.deallI: -DSPEC_CPU_LP64`

`453.povray: -DSPEC_CPU_LP64`

Continued on next page

Standard Performance Evaluation Corporation

[info@spec.org](mailto:info@spec.org)

<http://www.spec.org/>

Page 5



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**ACTION S.A.**

**SPECfp\_rate2006 = 154**

**ACTINA SOLAR 200 X5 (Intel Xeon E5-2603)**

**SPECfp\_rate\_base2006 = 178**

**CPU2006 license:** 9008

**Test date:** Jan-2013

**Test sponsor:** ACTION S.A.

**Hardware Availability:** Mar-2012

**Tested by:** ACTION S.A.

**Software Availability:** Feb-2012

## Peak Portability Flags (Continued)

454.calculix: -DSPEC\_CPU\_LP64 -nofor\_main  
 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: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
 -no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32  
 -opt-mem-layout-trans=3

470.lbm: basepeak = yes

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll2

### C++ benchmarks:

444.namd: -xAVX(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.dealIII: basepeak = yes

450.soplex: -xAVX(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

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

### Fortran benchmarks:

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

416.gamess: -xAVX(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: -xAVX -ipo -O3 -no-prec-div -static -opt-prefetch

459.GemsFDTD: -xAVX(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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**ACTION S.A.**

**SPECfp\_rate2006 = 154**

**ACTINA SOLAR 200 X5 (Intel Xeon E5-2603)**

**SPECfp\_rate\_base2006 = 178**

**CPU2006 license:** 9008

**Test date:** Jan-2013

**Test sponsor:** ACTION S.A.

**Hardware Availability:** Mar-2012

**Tested by:** ACTION S.A.

**Software Availability:** Feb-2012

## Peak Optimization Flags (Continued)

465.tonto: -xAVX(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

Benchmarks using both Fortran and C:

435.gromacs: -xAVX(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 -opt-mem-layout-trans=3

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -static -auto-ilp32  
-opt-mem-layout-trans=3

481.wrf: Same as 454.calculix

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Thu Jul 24 15:07:06 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 12 February 2013.