



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## ACTION S.A.

ACTINA SOLAR 222 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECfp<sup>®</sup>\_rate2006 = 579

SPECfp\_rate\_base2006 = 566

CPU2006 license: 9008

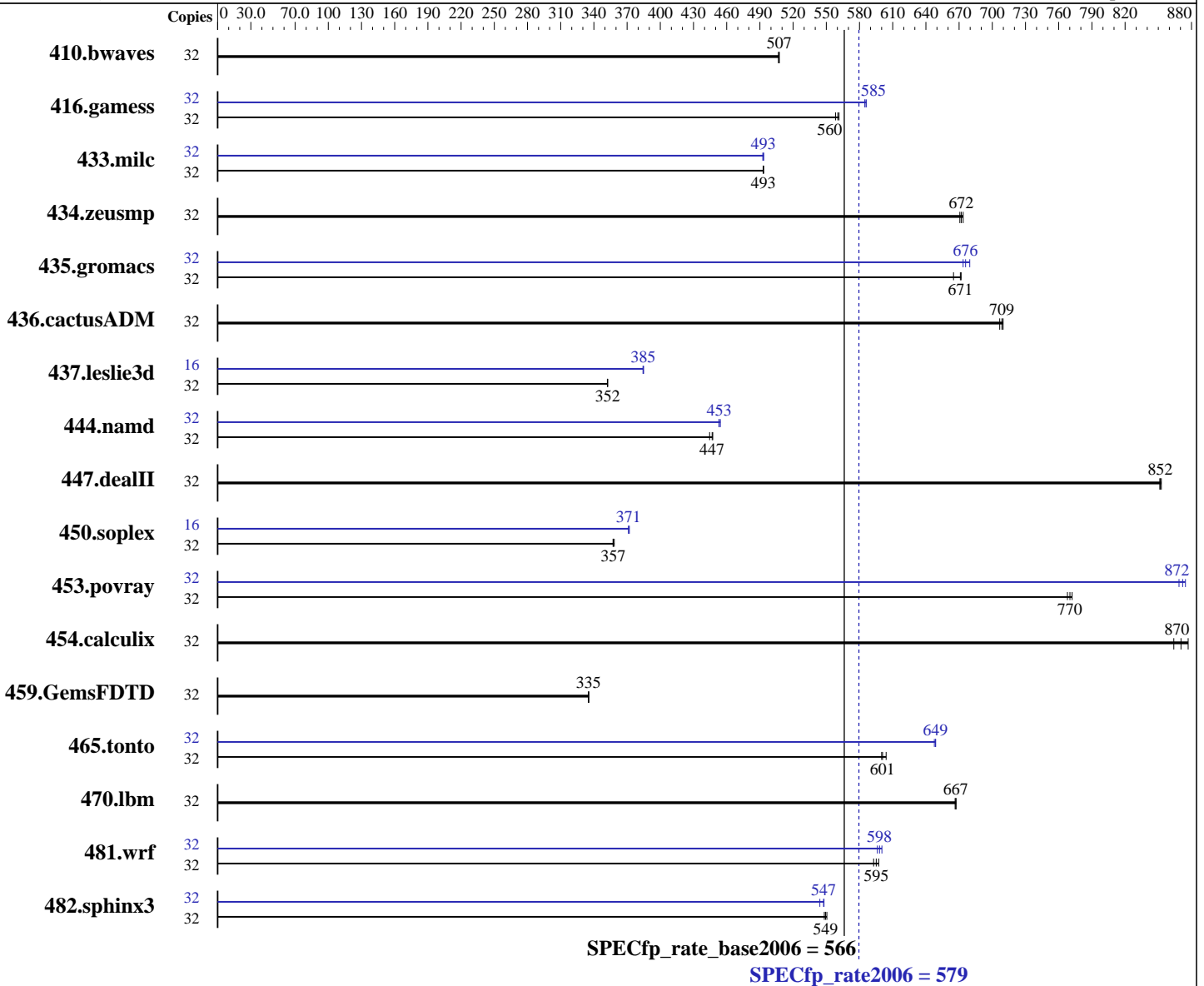
Test sponsor: ACTION S.A.

Tested by: ACTION S.A.

Test date: Feb-2015

Hardware Availability: Sep-2014

Software Availability: Sep-2014



### Hardware

CPU Name: Intel Xeon E5-2630 v3  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 16 cores, 2 chips, 8 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: Red Hat Enterprise Linux Server release 7.0 (Maipo)  
 3.10.0-123.20.1.el7.x86\_64  
 Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux;  
 Fortran: Version 15.0.0.090 of Intel Fortran Studio XE for Linux  
 Auto Parallel: No  
 File System: ext4

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## ACTION S.A.

ACTINA SOLAR 222 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECfp\_rate2006 = **579**

SPECfp\_rate\_base2006 = **566**

CPU2006 license: 9008

Test sponsor: ACTION S.A.

Tested by: ACTION S.A.

Test date: Feb-2015

Hardware Availability: Sep-2014

Software Availability: Sep-2014

L3 Cache: 20 MB I+D on chip per chip  
Other Cache: None  
Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R, running at 1866 MHz)  
Disk Subsystem: 1 x 240 GB SATA II SSD  
Other Hardware: None

System State: Run level 3 (multi-user)  
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	32	857	507	858	507	<b>857</b>	<b>507</b>	32	857	507	858	507	<b>857</b>	<b>507</b>
416.gamess	32	1116	562	1122	558	<b>1118</b>	<b>560</b>	32	1071	585	1069	586	<b>1071</b>	<b>585</b>
433.milc	32	596	493	<b>596</b>	<b>493</b>	595	493	32	596	493	<b>596</b>	<b>493</b>	595	493
434.zeusmp	32	432	674	434	671	<b>433</b>	<b>672</b>	32	432	674	434	671	<b>433</b>	<b>672</b>
435.gromacs	32	<b>340</b>	<b>671</b>	340	672	344	665	32	336	680	<b>338</b>	<b>676</b>	339	674
436.cactusADM	32	541	707	<b>540</b>	<b>709</b>	539	710	32	541	707	<b>540</b>	<b>709</b>	539	710
437.leslie3d	32	<b>854</b>	<b>352</b>	854	352	853	352	16	<b>391</b>	<b>385</b>	391	384	391	385
444.namd	32	<b>574</b>	<b>447</b>	574	447	577	445	32	565	454	<b>566</b>	<b>453</b>	567	453
447.dealII	32	<b>430</b>	<b>852</b>	430	851	429	853	32	<b>430</b>	<b>852</b>	430	851	429	853
450.soplex	32	745	358	747	357	<b>747</b>	<b>357</b>	16	359	371	<b>359</b>	<b>371</b>	359	372
453.povray	32	222	768	220	772	<b>221</b>	<b>770</b>	32	195	875	<b>195</b>	<b>872</b>	196	869
454.calculix	32	301	877	<b>303</b>	<b>870</b>	306	864	32	301	877	<b>303</b>	<b>870</b>	306	864
459.GemsFDTD	32	1013	335	<b>1013</b>	<b>335</b>	1012	335	32	1013	335	<b>1013</b>	<b>335</b>	1012	335
465.tonto	32	<b>524</b>	<b>601</b>	525	600	521	604	32	485	649	486	648	<b>485</b>	<b>649</b>
470.lbm	32	659	667	<b>659</b>	<b>667</b>	660	666	32	659	667	<b>659</b>	<b>667</b>	660	666
481.wrf	32	598	597	<b>601</b>	<b>595</b>	603	593	32	600	596	<b>598</b>	<b>598</b>	596	600
482.sphinx3	32	1138	548	1133	551	<b>1135</b>	<b>549</b>	32	<b>1139</b>	<b>547</b>	1146	544	1138	548

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"

## Platform Notes

Bios Settings  
Power Technology = Energy Efficient

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## ACTION S.A.

ACTINA SOLAR 222 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECfp\_rate2006 = 579

SPECfp\_rate\_base2006 = 566

CPU2006 license: 9008

Test sponsor: ACTION S.A.

Tested by: ACTION S.A.

Test date: Feb-2015

Hardware Availability: Sep-2014

Software Availability: Sep-2014

### Platform Notes (Continued)

Enforce POR = Disabled

BMC Setting

Fan Mode = Full Speed

Sysinfo program /cpu2006.1.2/config/sysinfo.rev6818

\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191

running on localhost.localdomain Wed Feb 18 15:52:36 2015

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 E5-2630 v3 @ 2.40GHz

2 "physical id"s (chips)

32 "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 : 8

siblings : 16

physical 0: cores 0 1 2 3 4 5 6 7

physical 1: cores 0 1 2 3 4 5 6 7

cache size : 20480 KB

From /proc/meminfo

MemTotal: 263871312 kB

HugePages\_Total: 0

Hugepagesize: 2048 kB

/usr/bin/lsb\_release -d

Red Hat Enterprise Linux Server release 7.0 (Maipo)

From /etc/\*release\* /etc/\*version\*

os-release:

NAME="Red Hat Enterprise Linux Server"

VERSION="7.0 (Maipo)"

ID="rhel"

ID\_LIKE="fedora"

VERSION\_ID="7.0"

PRETTY\_NAME="Red Hat Enterprise Linux"

ANSI\_COLOR="0;31"

CPE\_NAME="cpe:/o:redhat:enterprise\_linux:7.0:GA:server"

redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)

system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)

system-release-cpe: cpe:/o:redhat:enterprise\_linux:7.0:ga:server

uname -a:

Linux localhost.localdomain 3.10.0-123.20.1.el7.x86\_64 #3 SMP Wed Feb 4

14:55:18 CET 2015 x86\_64 x86\_64 x86\_64 GNU/Linux

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

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



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

**ACTION S.A.**

ACTINA SOLAR 222 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

**SPECfp\_rate2006 = 579**

**SPECfp\_rate\_base2006 = 566**

**CPU2006 license:** 9008

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

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

**Test date:** Feb-2015

**Hardware Availability:** Sep-2014

**Software Availability:** Sep-2014

## Platform Notes (Continued)

run-level 3 Feb 18 15:47

SPEC is set to: /cpu2006.1.2

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sdal	ext4	212G	25G	176G	13%	/

Additional information from dmidecode:

BIOS American Megatrends Inc. 1.0a 11/05/2014

Memory:

16x 16 GB

2x Samsung(data:14/40) M393A2G40DB0-CPB 16 GB 1866 MHz 2 rank

14x Samsung(data:14/48) M393A2G40DB0-CPB 16 GB 1866 MHz 2 rank

(End of data from sysinfo program)

dmidecode does not properly detect memory modules

16 modules of 16 GB were used to run the test (256 GB total)

## 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:/cpu2006.1.2/sh"

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat\_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>

Binaries compiled on a system with 2x Xeon E5-2650 v3 chips + 256 GB memory using RedHat EL 7.0

## 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



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## ACTION S.A.

ACTINA SOLAR 222 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECfp\_rate2006 = 579

SPECfp\_rate\_base2006 = 566

CPU2006 license: 9008

Test sponsor: ACTION S.A.

Tested by: ACTION S.A.

Test date: Feb-2015

Hardware Availability: Sep-2014

Software Availability: Sep-2014

## 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:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

```

C++ benchmarks:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

```

Fortran benchmarks:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

```

Benchmarks using both Fortran and C:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

```

## Peak Compiler Invocation

C benchmarks:

```

icc -m64

```

C++ benchmarks (except as noted below):

```

icpc -m64

```

```

450.soplex: icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

```

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## ACTION S.A.

ACTINA SOLAR 222 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECfp\_rate2006 = 579

SPECfp\_rate\_base2006 = 566

CPU2006 license: 9008

Test sponsor: ACTION S.A.

Tested by: ACTION S.A.

Test date: Feb-2015

Hardware Availability: Sep-2014

Software Availability: Sep-2014

## Peak Compiler Invocation (Continued)

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  
 482.sphinx3: -DSPEC\_CPU\_LP64

## Peak Optimization Flags

C benchmarks:

433.milc: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
 -O3(pass 2) -no-prec-div(pass 2)  
 -opt-mem-layout-trans=3(pass 2) -prof-use(pass 2)  
 -auto-ilp32

470.lbm: basepeak = yes

482.sphinx3: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-mem-layout-trans=3  
 -unroll2

C++ benchmarks:

444.namd: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
 -O3(pass 2) -no-prec-div(pass 2)  
 -opt-mem-layout-trans=3(pass 2) -prof-use(pass 2) -fno-alias  
 -auto-ilp32

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

**ACTION S.A.**

**SPECfp\_rate2006 = 579**

ACTINA SOLAR 222 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

**SPECfp\_rate\_base2006 = 566**

**CPU2006 license:** 9008

**Test date:** Feb-2015

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

**Hardware Availability:** Sep-2014

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

**Software Availability:** Sep-2014

## Peak Optimization Flags (Continued)

447.dealIII: basepeak = yes

450.soplex: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2)  
-opt-mem-layout-trans=3(pass 2) -prof-use(pass 2)  
-opt-malloc-options=3

453.povray: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2)  
-opt-mem-layout-trans=3(pass 2) -prof-use(pass 2) -unroll14  
-ansi-alias

### Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xCORE-AVX2(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-

434.zeusmp: basepeak = yes

437.leslie3d: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

459.GemsFDTD: basepeak = yes

465.tonto: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll14  
-auto -inline-calloc -opt-malloc-options=3

### Benchmarks using both Fortran and C:

435.gromacs: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2)  
-opt-mem-layout-trans=3(pass 2) -prof-use(pass 2)  
-opt-prefetch -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: -xCORE-AVX2 -ipo -O3 -no-prec-div -auto-ilp32

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/ACTION.SA-Platform-Flags-RevC-jan-2015-For-Supermicro-Platform.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/ACTION.SA-Platform-Flags-RevC-jan-2015-For-Supermicro-Platform.xml>



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## ACTION S.A.

ACTINA SOLAR 222 S6 (Intel Xeon E5-2630 v3, 2.40 GHz)

SPECfp\_rate2006 = 579

SPECfp\_rate\_base2006 = 566

**CPU2006 license:** 9008

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

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

**Test date:** Feb-2015

**Hardware Availability:** Sep-2014

**Software Availability:** Sep-2014

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 Tue Mar 10 16:03:13 2015 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 10 March 2015.