



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp®2006 = 46.1

Altos R360 F2 (Intel Xeon E5-2603)

SPECfp_base2006 = 44.6

CPU2006 license: 97

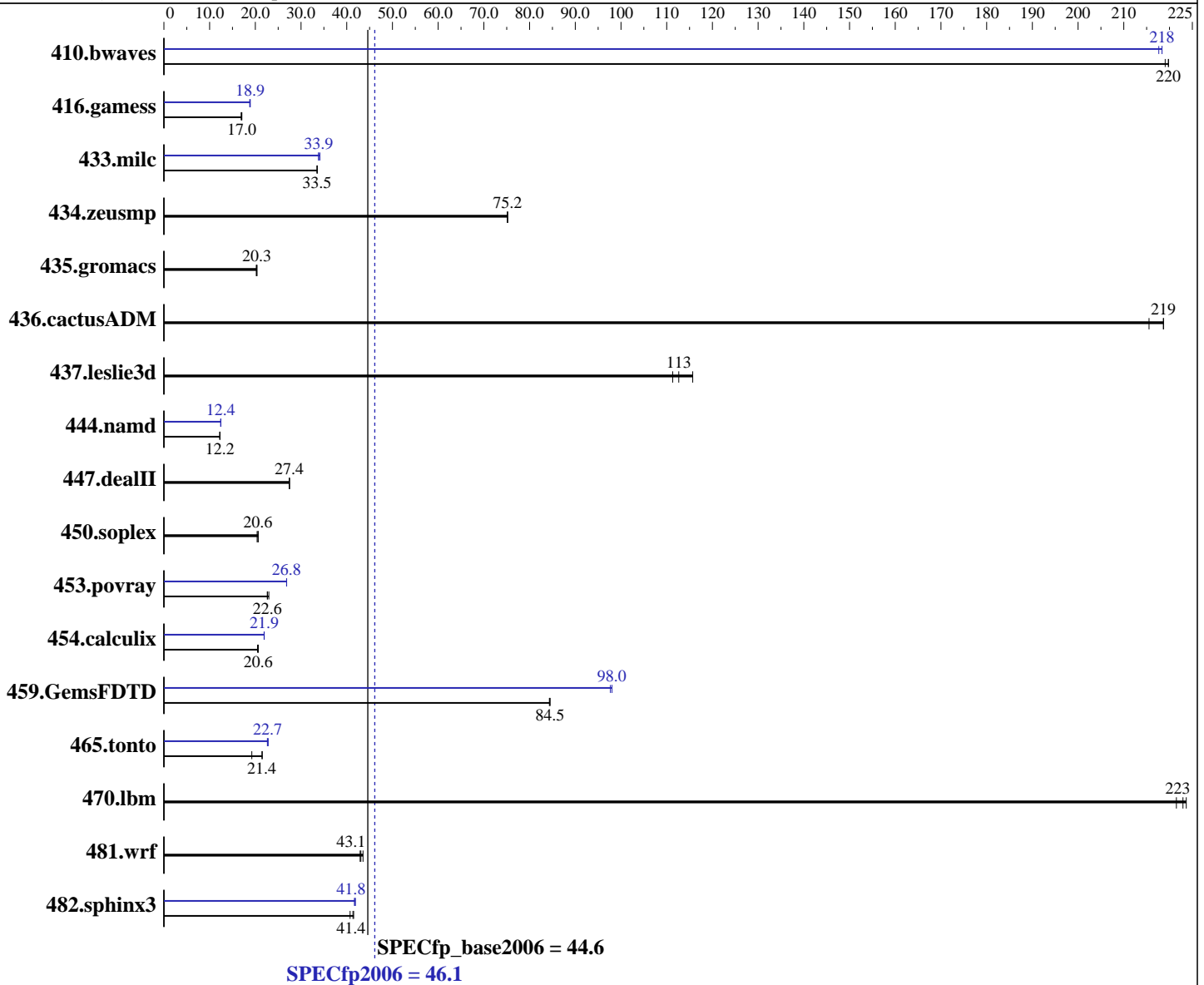
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Mar-2013

Hardware Availability: Apr-2013

Software Availability: Jun-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: 2 chip
 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 6.3 (Santiago)
 2.6.32-279.el6.x86_64
 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: Yes
 File System: ext4

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp2006 = 46.1

Altos R360 F2 (Intel Xeon E5-2603)

SPECfp_base2006 = 44.6

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Mar-2013

Hardware Availability: Apr-2013

Software Availability: Jun-2012

L3 Cache: 10 MB I+D on chip per chip
Other Cache: None
Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 1 x 1 TB SATA, 7200 RPM
Other Hardware: None

System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

| Benchmark | Base | | | | | | Peak | | | | | |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves | 61.8 | 220 | 61.8 | 220 | 62.0 | 219 | 62.4 | 218 | 62.2 | 218 | 62.2 | 218 |
| 416.gamess | 1149 | 17.0 | 1159 | 16.9 | 1149 | 17.0 | 1043 | 18.8 | 1037 | 18.9 | 1038 | 18.9 |
| 433.milc | 274 | 33.5 | 274 | 33.5 | 274 | 33.5 | 269 | 34.1 | 271 | 33.9 | 271 | 33.8 |
| 434.zeusmp | 121 | 75.2 | 121 | 75.2 | 121 | 75.2 | 121 | 75.2 | 121 | 75.2 | 121 | 75.2 |
| 435.gromacs | 350 | 20.4 | 352 | 20.3 | 353 | 20.2 | 350 | 20.4 | 352 | 20.3 | 353 | 20.2 |
| 436.cactusADM | 54.6 | 219 | 54.6 | 219 | 55.4 | 216 | 54.6 | 219 | 54.6 | 219 | 55.4 | 216 |
| 437.leslie3d | 83.4 | 113 | 84.4 | 111 | 81.2 | 116 | 83.4 | 113 | 84.4 | 111 | 81.2 | 116 |
| 444.namd | 655 | 12.2 | 655 | 12.2 | 655 | 12.2 | 644 | 12.5 | 645 | 12.4 | 645 | 12.4 |
| 447.dealII | 416 | 27.5 | 417 | 27.4 | 417 | 27.4 | 416 | 27.5 | 417 | 27.4 | 417 | 27.4 |
| 450.soplex | 405 | 20.6 | 409 | 20.4 | 405 | 20.6 | 405 | 20.6 | 409 | 20.4 | 405 | 20.6 |
| 453.povray | 232 | 23.0 | 235 | 22.6 | 235 | 22.6 | 198 | 26.8 | 198 | 26.9 | 198 | 26.8 |
| 454.calculix | 400 | 20.6 | 400 | 20.6 | 403 | 20.5 | 376 | 22.0 | 376 | 21.9 | 376 | 21.9 |
| 459.GemsFDTD | 126 | 84.5 | 126 | 84.3 | 126 | 84.5 | 109 | 97.7 | 108 | 98.0 | 108 | 98.0 |
| 465.tonto | 457 | 21.5 | 459 | 21.4 | 512 | 19.2 | 435 | 22.6 | 433 | 22.7 | 431 | 22.8 |
| 470.lbm | 62.0 | 222 | 61.4 | 224 | 61.6 | 223 | 62.0 | 222 | 61.4 | 224 | 61.6 | 223 |
| 481.wrf | 259 | 43.1 | 256 | 43.6 | 260 | 42.9 | 259 | 43.1 | 256 | 43.6 | 260 | 42.9 |
| 482.sphinx3 | 469 | 41.5 | 471 | 41.4 | 478 | 40.7 | 466 | 41.8 | 468 | 41.7 | 465 | 41.9 |

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

Operating System Notes

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

Platform Notes

Sysinfo program /usr/cpu2006/config/sysinfo.rev6800
\$Rev: 6800 \$ \$Date:: 2011-10-11 #\$ 6f2ebdff5032aaa42e583f96b07f99d3
running on altosr380f2 Wed Mar 20 10:51:42 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
Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp2006 = 46.1

Altos R360 F2 (Intel Xeon E5-2603)

SPECfp_base2006 = 44.6

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Mar-2013

Hardware Availability: Apr-2013

Software Availability: Jun-2012

Platform Notes (Continued)

```

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:      132113996 kB
HugePages_Total: 0
Hugepagesize:  2048 kB

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.3 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
Linux altosr380f2 2.6.32-279.el6.x86_64 #1 SMP Wed Jun 13 18:24:36 EDT 2012
x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Mar 20 10:50

SPEC is set to: /usr/cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/mapper/vg_altosr380f2-lv_root
    ext4       913G    73G  794G   9% /

Additional information from dmidecode:
Memory:
16x Hynix HMT31GR7CFR4C-PB 8 GB 1600 MHz 2 rank

(End of data from sysinfo program)

```

General Notes

Environment variables set by runspec before the start of the run:

```

KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64"
OMP_NUM_THREADS = "8"

```

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5
Transparent Huge Pages enabled with:

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

| | | |
|------------------------------------|-------------------|------|
| Acer Incorporated | SPECfp2006 = | 46.1 |
| Altos R360 F2 (Intel Xeon E5-2603) | SPECfp_base2006 = | 44.6 |

| | | |
|---------------------------------|------------------------|----------|
| CPU2006 license: 97 | Test date: | Mar-2013 |
| Test sponsor: Acer Incorporated | Hardware Availability: | Apr-2013 |
| Tested by: Acer Incorporated | Software Availability: | Jun-2012 |

General Notes (Continued)

echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>
 Altos R360 F2 and Altos R380 F2 are electronically equivalent.
 This result was measured on Altos R380 F2.

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.deall: -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:
 -xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
 -ansi-alias

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

| | | |
|------------------------------------|-------------------|------|
| Acer Incorporated | SPECfp2006 = | 46.1 |
| Altos R360 F2 (Intel Xeon E5-2603) | SPECfp_base2006 = | 44.6 |

| | | |
|---------------------------------|------------------------|----------|
| CPU2006 license: 97 | Test date: | Mar-2013 |
| Test sponsor: Acer Incorporated | Hardware Availability: | Apr-2013 |
| Tested by: Acer Incorporated | Software Availability: | Jun-2012 |

Base Optimization Flags (Continued)

C++ benchmarks:

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

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

`-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias`

Peak Compiler Invocation

C benchmarks:

`icc -m64`

C++ benchmarks:

`icpc -m64`

Fortran benchmarks:

`ifort -m64`

Benchmarks using both Fortran and C:

`icc -m64 ifort -m64`

Peak Portability Flags

Same as Base Portability Flags

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
-ansi-alias`

470.lbm: `basepeak = yes`

482.sphinx3: `-xAVX -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel`

C++ benchmarks:

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp2006 = 46.1

Altos R360 F2 (Intel Xeon E5-2603)

SPECfp_base2006 = 44.6

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Mar-2013

Hardware Availability: Apr-2013

Software Availability: Jun-2012

Peak Optimization Flags (Continued)

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.dealII: basepeak = yes

450.soplex: basepeak = yes

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 -ipo -O3 -no-prec-div -opt-prefetch -parallel
-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: basepeak = yes

459.GemsFDTD: -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 -opt-prefetch -parallel

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc
-opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

481.wrf: basepeak = yes

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 CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

| | | |
|------------------------------------|-------------------|------|
| Acer Incorporated | SPECfp2006 = | 46.1 |
| Altos R360 F2 (Intel Xeon E5-2603) | SPECfp_base2006 = | 44.6 |

| | |
|--|--|
| CPU2006 license: 97 | Test date: Mar-2013 |
| Test sponsor: Acer Incorporated | Hardware Availability: Apr-2013 |
| Tested by: Acer Incorporated | Software Availability: Jun-2012 |

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.

Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 15:38:56 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 April 2013.