



SPEC® CFP2006 Result

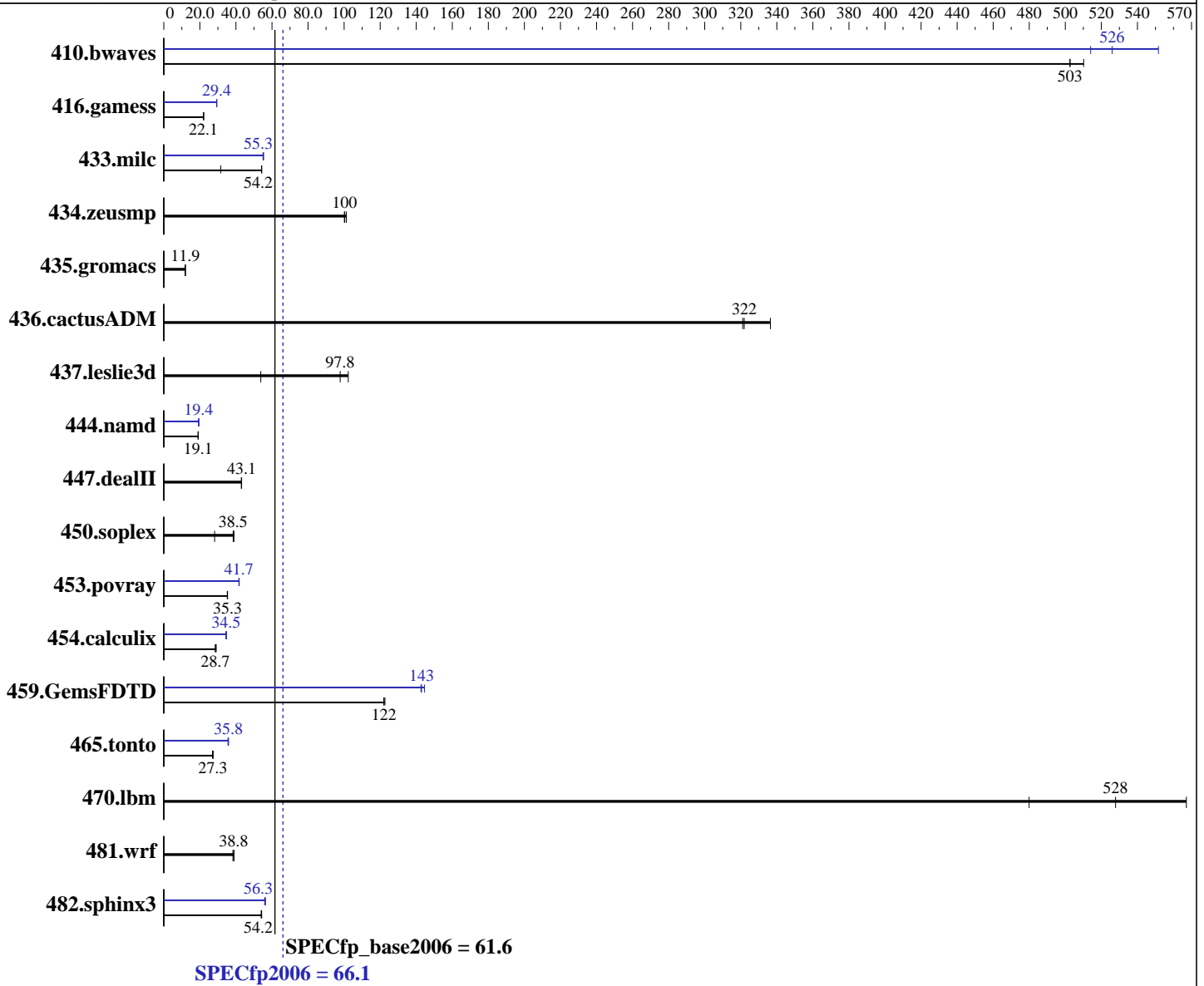
Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated
Acer AR580 F2 (Xeon E5-4640)

SPECfp®2006 = 66.1
SPECfp_base2006 = 61.6

CPU2006 license: 97
Test sponsor: Acer Incorporated
Tested by: Acer Incorporated

Test date: Apr-2013
Hardware Availability: Dec-2012
Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon E5-4640
CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
CPU MHz: 2400
FPU: Integrated
CPU(s) enabled: 32 cores, 4 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable: 2,4 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 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 = 66.1

Acer AR580 F2 (Xeon E5-4640)

SPECfp_base2006 = 61.6

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Apr-2013

Hardware Availability: Dec-2012

Software Availability: Dec-2011

L3 Cache: 20 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (32 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 1 x 900 GB SAS, 10K 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	<u>27.0</u>	<u>503</u>	27.0	503	26.6	510	24.6	552	26.4	514	<u>25.8</u>	<u>526</u>
416.gamess	888	<u>22.1</u>	886	22.1	890	22.0	<u>667</u>	<u>29.4</u>	668	29.3	666	29.4
433.milc	<u>169</u>	<u>54.2</u>	290	31.6	169	54.3	167	55.0	166	55.3	<u>166</u>	<u>55.3</u>
434.zeusmp	90.9	100	89.9	101	<u>90.7</u>	<u>100</u>	90.9	100	89.9	101	<u>90.7</u>	<u>100</u>
435.gromacs	<u>599</u>	<u>11.9</u>	596	12.0	601	11.9	<u>599</u>	<u>11.9</u>	596	12.0	601	11.9
436.cactusADM	35.5	336	37.2	321	<u>37.1</u>	<u>322</u>	35.5	336	37.2	321	<u>37.1</u>	<u>322</u>
437.leslie3d	175	53.8	<u>96.1</u>	<u>97.8</u>	91.9	102	175	53.8	<u>96.1</u>	<u>97.8</u>	91.9	102
444.namd	421	19.1	421	19.1	<u>421</u>	<u>19.1</u>	414	19.4	414	19.4	<u>414</u>	<u>19.4</u>
447.dealII	<u>265</u>	<u>43.1</u>	266	43.0	265	43.1	<u>265</u>	<u>43.1</u>	266	43.0	265	43.1
450.soplex	<u>217</u>	<u>38.5</u>	214	38.9	296	28.2	<u>217</u>	<u>38.5</u>	214	38.9	296	28.2
453.povray	150	35.4	151	35.2	<u>151</u>	<u>35.3</u>	<u>128</u>	<u>41.7</u>	127	41.8	128	41.7
454.calculix	284	29.1	<u>288</u>	<u>28.7</u>	289	28.5	<u>239</u>	<u>34.5</u>	237	34.8	239	34.5
459.GemsFDTD	86.5	123	86.9	122	<u>86.9</u>	<u>122</u>	<u>74.2</u>	<u>143</u>	73.4	145	74.4	143
465.tonto	360	27.3	<u>361</u>	<u>27.3</u>	364	27.0	<u>275</u>	<u>35.8</u>	276	35.6	274	35.9
470.lbm	24.2	567	28.6	480	<u>26.0</u>	<u>528</u>	24.2	567	28.6	480	<u>26.0</u>	<u>528</u>
481.wrf	287	38.9	<u>288</u>	<u>38.8</u>	291	38.3	287	38.9	<u>288</u>	<u>38.8</u>	291	38.3
482.sphinx3	359	54.3	<u>360</u>	<u>54.2</u>	361	54.0	346	56.3	<u>346</u>	<u>56.3</u>	348	55.9

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 r580f2 Mon Apr 8 17:49:44 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 E5-4640 0 @ 2.40GHz
Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated	SPECfp2006 =	66.1
Acer AR580 F2 (Xeon E5-4640)	SPECfp_base2006 =	61.6

CPU2006 license: 97	Test date: Apr-2013
Test sponsor: Acer Incorporated	Hardware Availability: Dec-2012
Tested by: Acer Incorporated	Software Availability: Dec-2011

Platform Notes (Continued)

```

4 "physical id"s (chips)
64 "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
physical 2: cores 0 1 2 3 4 5 6 7
physical 3: cores 0 1 2 3 4 5 6 7
cache size : 20480 KB

```

```

From /proc/meminfo
MemTotal:      264460152 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 r580f2 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 Apr 8 17:45
```

```

SPEC is set to: /usr/cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda3        ext4      698G  241G  423G  37% /

```

```

Additional information from dmidecode:
Memory:
32x 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,compact,1,0"
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64"
OMP_NUM_THREADS = "32"

```

```

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

```

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated	SPECfp2006 =	66.1
Acer AR580 F2 (Xeon E5-4640)	SPECfp_base2006 =	61.6

CPU2006 license: 97	Test date:	Apr-2013
Test sponsor: Acer Incorporated	Hardware Availability:	Dec-2012
Tested by: Acer Incorporated	Software Availability:	Dec-2011

General Notes (Continued)

Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 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.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:
 -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 =	66.1
Acer AR580 F2 (Xeon E5-4640)	SPECfp_base2006 =	61.6

CPU2006 license: 97	Test date:	Apr-2013
Test sponsor: Acer Incorporated	Hardware Availability:	Dec-2012
Tested by: Acer Incorporated	Software Availability:	Dec-2011

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 = 66.1

Acer AR580 F2 (Xeon E5-4640)

SPECfp_base2006 = 61.6

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Apr-2013

Hardware Availability: Dec-2012

Software Availability: Dec-2011

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.dealIII: 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 files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.xml>



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated	SPECfp2006 =	66.1
Acer AR580 F2 (Xeon E5-4640)	SPECfp_base2006 =	61.6

CPU2006 license: 97	Test date: Apr-2013
Test sponsor: Acer Incorporated	Hardware Availability: Dec-2012
Tested by: Acer Incorporated	Software Availability: Dec-2011

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 15:27:04 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 23 April 2013.