



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp®2006 = **21.4**

IBM System x3500 (Intel Xeon E5430)

SPECfp_base2006 = **18.0**

CPU2006 license: 11

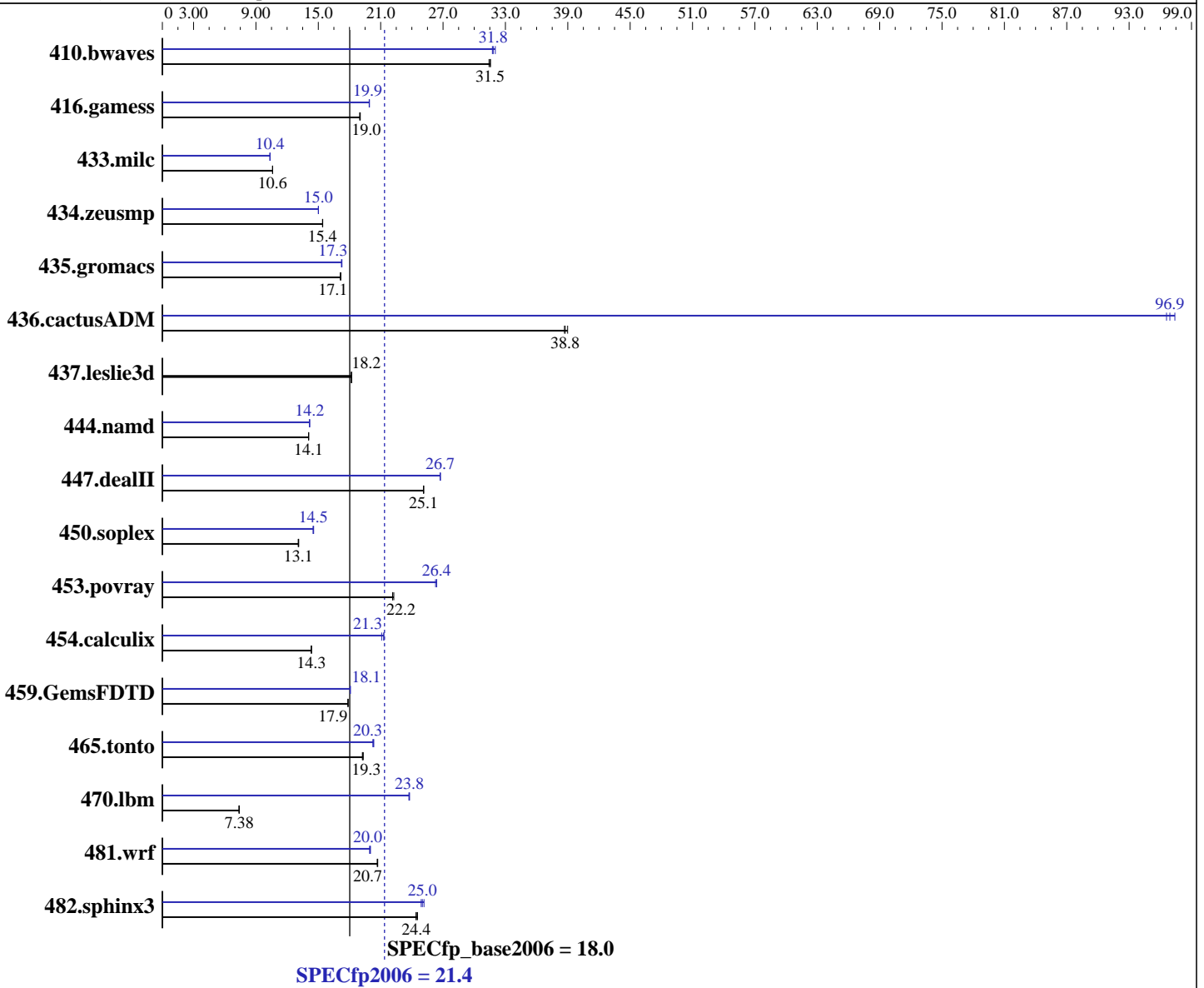
Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Apr-2008

Hardware Availability: Jan-2008

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon E5430
 CPU Characteristics: 1333MHz system bus
 CPU MHz: 2667
 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: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

Continued on next page

Software

Operating System: SuSE Linux Enterprise Server 10 (x86_64), Kernel 2.6.16.21-0.8-smp
 Compiler: Intel C++ and Fortran Compiler 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008, l_fc_p_10.1.008
 Auto Parallel: Yes
 File System: ReiserFS
 System State: Multi-user, run level 3
 Base Pointers: 64-bit

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp2006 = 21.4

IBM System x3500 (Intel Xeon E5430)

SPECfp_base2006 = 18.0

CPU2006 license: 11

Test date: Apr-2008

Test sponsor: IBM Corporation

Hardware Availability: Jan-2008

Tested by: IBM Corporation

Software Availability: Nov-2007

L3 Cache: None
Other Cache: None
Memory: 16 GB (8 x 2 GB DDR2-5300F ECC)
Disk Subsystem: 1 x 80 GB SATA, 7200 RPM
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: Binutils 2.17.50.0.15

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	431	31.6	431	31.5	433	31.4	424	32.0	427	31.8	428	31.7
416.gamess	1030	19.0	1028	19.0	1031	19.0	984	19.9	983	19.9	984	19.9
433.milc	865	10.6	866	10.6	866	10.6	888	10.3	886	10.4	886	10.4
434.zeusmp	591	15.4	590	15.4	590	15.4	606	15.0	606	15.0	606	15.0
435.gromacs	417	17.1	416	17.2	416	17.1	414	17.3	415	17.2	413	17.3
436.cactusADM	308	38.8	309	38.7	307	39.0	123	97.4	123	96.9	124	96.6
437.leslie3d	516	18.2	516	18.2	517	18.2	516	18.2	516	18.2	517	18.2
444.namd	570	14.1	570	14.1	570	14.1	567	14.1	566	14.2	566	14.2
447.dealII	455	25.1	455	25.1	455	25.1	428	26.8	428	26.7	428	26.7
450.soplex	636	13.1	637	13.1	638	13.1	573	14.6	575	14.5	575	14.5
453.povray	239	22.3	240	22.2	240	22.2	202	26.4	202	26.3	202	26.4
454.calculix	576	14.3	575	14.3	576	14.3	387	21.3	387	21.3	391	21.1
459.GemsFDTD	594	17.9	594	17.9	594	17.9	587	18.1	587	18.1	587	18.1
465.tonto	509	19.3	511	19.2	510	19.3	484	20.3	485	20.3	486	20.3
470.lbm	1865	7.37	1861	7.38	1854	7.41	578	23.8	578	23.8	579	23.7
481.wrf	540	20.7	539	20.7	540	20.7	559	20.0	560	19.9	558	20.0
482.sphinx3	794	24.5	797	24.4	799	24.4	783	24.9	779	25.0	774	25.2

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

General Notes

All benchmarks compiled in 64-bit mode except 450.soplex, 470.lbm and 482.sphinx3, at peak, are compiled in 32-bit mode
Hardware Sector Prefetch Enabled and Adjacent Sector Prefetch Enabled
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0
KMP_STACKSIZE set to 200M
This result is measured on an IBM System x 3500 Server. Note that the IBM System x 3500 and IBM System x 3400 are electrically equivalent.



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp2006 = 21.4

IBM System x3500 (Intel Xeon E5430)

SPECfp_base2006 = 18.0

CPU2006 license: 11

Test date: Apr-2008

Test sponsor: IBM Corporation

Hardware Availability: Jan-2008

Tested by: IBM Corporation

Software Availability: Nov-2007

Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icc ifort

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:

-fast -parallel

C++ benchmarks:

-fast -parallel

Fortran benchmarks:

-fast -parallel

Benchmarks using both Fortran and C:

-fast -parallel



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp2006 = 21.4

IBM System x3500 (Intel Xeon E5430)

SPECfp_base2006 = 18.0

CPU2006 license: 11

Test date: Apr-2008

Test sponsor: IBM Corporation

Hardware Availability: Jan-2008

Tested by: IBM Corporation

Software Availability: Nov-2007

Peak Compiler Invocation

C benchmarks (except as noted below):

```
/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include
```

```
433.milc: icc
```

C++ benchmarks (except as noted below):

```
icpc
```

```
450.soplex: /opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include
```

Fortran benchmarks:

```
ifort
```

Benchmarks using both Fortran and C:

```
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
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
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
```

Peak Optimization Flags

C benchmarks:

```
433.milc: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
-auto-ilp32
```

```
470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-scalar-rep- -prefetch -opt-malloc-options=3
```

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp2006 = 21.4

IBM System x3500 (Intel Xeon E5430)

SPECfp_base2006 = 18.0

CPU2006 license: 11

Test date: Apr-2008

Test sponsor: IBM Corporation

Hardware Availability: Jan-2008

Tested by: IBM Corporation

Software Availability: Nov-2007

Peak Optimization Flags (Continued)

482.sphinx3: -fast -unroll2

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
-auto-ilp32

447.dealIII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast
-opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4
-ansi-alias

Fortran benchmarks:

410.bwaves: -fast -prefetch -parallel

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: basepeak = yes

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-prefetch -parallel

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-prefetch -parallel -auto-ilp32

454.calculix: -fast -unroll-aggressive -auto-ilp32

481.wrf: -fast -parallel -prefetch -auto-ilp32

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

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-fp-linux64-revC.20090713.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-fp-linux64-revC.20090713.xml>



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp2006 = 21.4

IBM System x3500 (Intel Xeon E5430)

SPECfp_base2006 = 18.0

CPU2006 license: 11

Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Apr-2008

Hardware Availability: Jan-2008

Software Availability: Nov-2007

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 v1.0.
Report generated on Tue Jul 22 17:20:58 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 13 May 2008.