



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp®2006 = 21.0

IBM System x3550 (Intel Xeon X5365)

SPECfp_base2006 = 18.1

CPU2006 license: 11

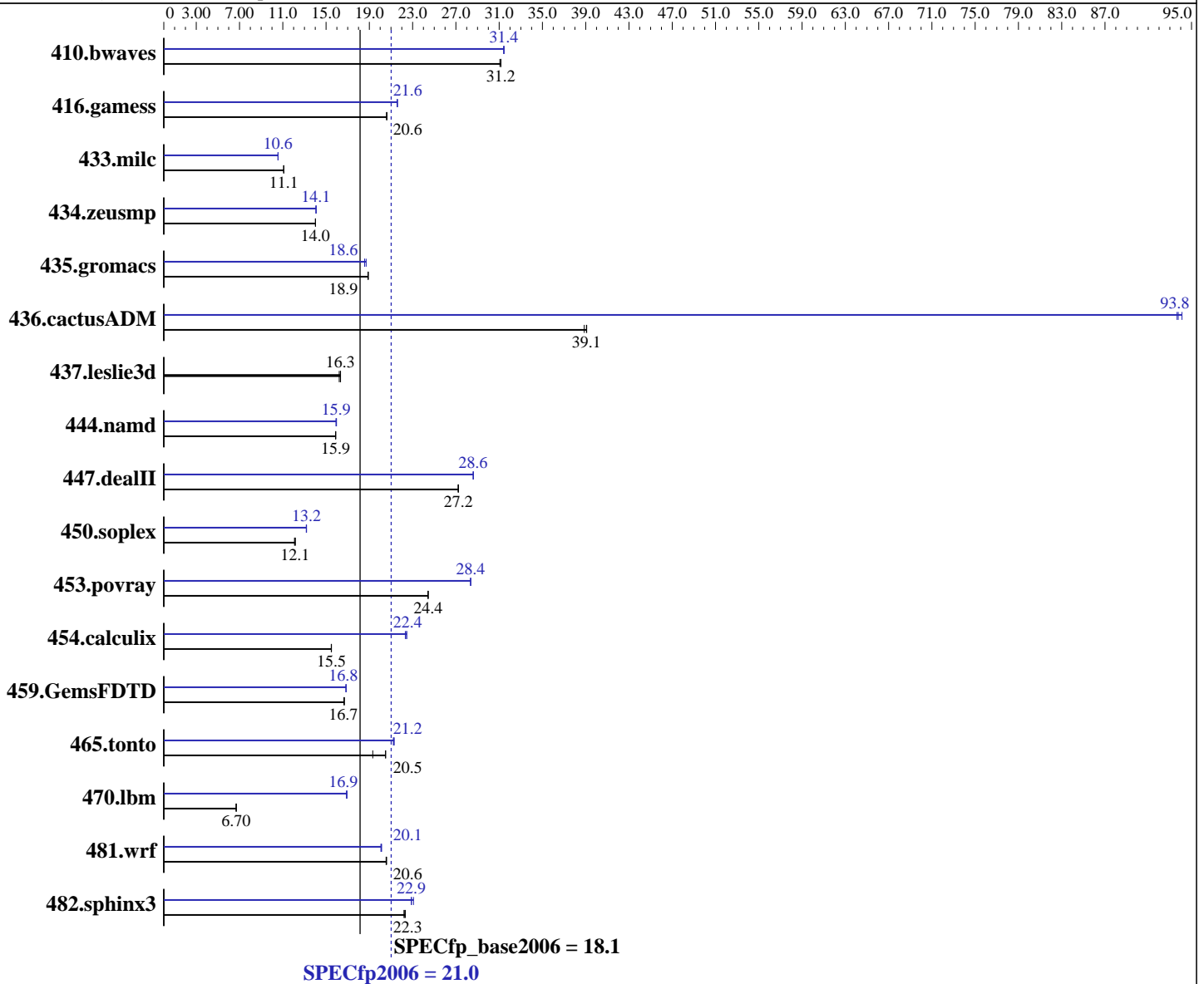
Test date: Aug-2007

Test sponsor: IBM Corporation

Hardware Availability: Sep-2007

Tested by: IBM Corporation

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X5365
 CPU Characteristics: 1333MHz system bus
 CPU MHz: 3000
 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: 8 MB I+D on chip per chip, 4 MB shared / 2 cores

Continued on next page

Software

Operating System: SLES 10 (x86_64), 2.6.16.21-0.8-smp
 Compiler: Intel C++ and Fortran Compiler for Linux version 10.1 Build 20070824
 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 = 21.0

IBM System x3550 (Intel Xeon X5365)

SPECfp_base2006 = 18.1

CPU2006 license: 11

Test date: Aug-2007

Test sponsor: IBM Corporation

Hardware Availability: Sep-2007

Tested by: IBM Corporation

Software Availability: Nov-2007

L3 Cache: None
Other Cache: None
Memory: 16 GB (8 x 2GB DRR2-5300F ECC)
Disk Subsystem: 1 x 36 GB SAS, 15000 RPM
Other Hardware: None

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 | 436 | 31.2 | 437 | 31.1 | 436 | 31.2 | <u>432</u> | <u>31.4</u> | 432 | 31.5 | 433 | 31.4 |
| 416.gamess | 950 | 20.6 | 951 | 20.6 | 949 | 20.6 | 906 | 21.6 | 908 | 21.6 | 908 | 21.6 |
| 433.milc | 827 | 11.1 | 828 | 11.1 | 828 | 11.1 | 869 | 10.6 | 870 | 10.6 | 869 | 10.6 |
| 434.zeusmp | 649 | 14.0 | 649 | 14.0 | 649 | 14.0 | 647 | 14.1 | 647 | 14.1 | 647 | 14.1 |
| 435.gromacs | 378 | 18.9 | 378 | 18.9 | 378 | 18.9 | 385 | 18.6 | 385 | 18.6 | 382 | 18.7 |
| 436.cactusADM | 308 | 38.9 | 306 | 39.1 | 306 | 39.1 | 127 | 94.1 | 127 | 93.8 | 128 | 93.7 |
| 437.leslie3d | 576 | 16.3 | 575 | 16.3 | 580 | 16.2 | 576 | 16.3 | 575 | 16.3 | 580 | 16.2 |
| 444.namd | 505 | 15.9 | 505 | 15.9 | 505 | 15.9 | 502 | 16.0 | 504 | 15.9 | 503 | 15.9 |
| 447.dealII | 420 | 27.2 | 420 | 27.2 | 421 | 27.2 | 400 | 28.6 | 400 | 28.6 | 400 | 28.6 |
| 450.soplex | 686 | 12.2 | 690 | 12.1 | 687 | 12.1 | 633 | 13.2 | 632 | 13.2 | 632 | 13.2 |
| 453.povray | 218 | 24.4 | 218 | 24.4 | 218 | 24.4 | 188 | 28.4 | 188 | 28.4 | 188 | 28.4 |
| 454.calculix | 533 | 15.5 | 532 | 15.5 | 533 | 15.5 | 367 | 22.5 | 370 | 22.3 | 368 | 22.4 |
| 459.GemsFDTD | 636 | 16.7 | 636 | 16.7 | 637 | 16.7 | 629 | 16.9 | 630 | 16.8 | 630 | 16.8 |
| 465.tonto | 480 | 20.5 | 480 | 20.5 | 509 | 19.3 | 463 | 21.2 | 462 | 21.3 | 463 | 21.2 |
| 470.lbm | 2049 | 6.70 | 2056 | 6.68 | 2052 | 6.70 | 814 | 16.9 | 813 | 16.9 | 811 | 16.9 |
| 481.wrf | 544 | 20.5 | 543 | 20.6 | 542 | 20.6 | 557 | 20.1 | 556 | 20.1 | 555 | 20.1 |
| 482.sphinx3 | 878 | 22.2 | 875 | 22.3 | 873 | 22.3 | 852 | 22.9 | 851 | 22.9 | 844 | 23.1 |

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

General Notes

OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0
KMP_STACKSIZE set to 200M

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp2006 = 21.0

IBM System x3550 (Intel Xeon X5365)

SPECfp_base2006 = 18.1

CPU2006 license: 11

Test date: Aug-2007

Test sponsor: IBM Corporation

Hardware Availability: Sep-2007

Tested by: IBM Corporation

Software Availability: Nov-2007

Base Compiler Invocation (Continued)

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

Peak Compiler Invocation

C benchmarks (except as noted below):

```

/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/lib

```

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp2006 = 21.0

IBM System x3550 (Intel Xeon X5365)

SPECfp_base2006 = 18.1

CPU2006 license: 11

Test date: Aug-2007

Test sponsor: IBM Corporation

Hardware Availability: Sep-2007

Tested by: IBM Corporation

Software Availability: Nov-2007

Peak Compiler Invocation (Continued)

C benchmarks (except as noted below) (continued):

-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/include

433.milc: icc

C++ benchmarks (except as noted below):

icpc

450.soplex: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/bin/icpc

-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/lib

-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/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 = 21.0

IBM System x3550 (Intel Xeon X5365)

SPECfp_base2006 = 18.1

CPU2006 license: 11

Test date: Aug-2007

Test sponsor: IBM Corporation

Hardware Availability: Sep-2007

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-intel64-linux-flags.20090714.21.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.21.xml>



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation SPECfp2006 = 21.0

IBM System x3550 (Intel Xeon X5365) SPECfp_base2006 = 18.1

| | |
|--------------------------------------|--|
| CPU2006 license: 11 | Test date: Aug-2007 |
| Test sponsor: IBM Corporation | Hardware Availability: Sep-2007 |
| Tested by: IBM Corporation | 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 14:49:30 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 16 October 2007.