



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

SPECfp[®]_rate2006 = 112

BladeSymphony BS320 (Intel Xeon E5603)

SPECfp_rate_base2006 = 106

CPU2006 license: 35

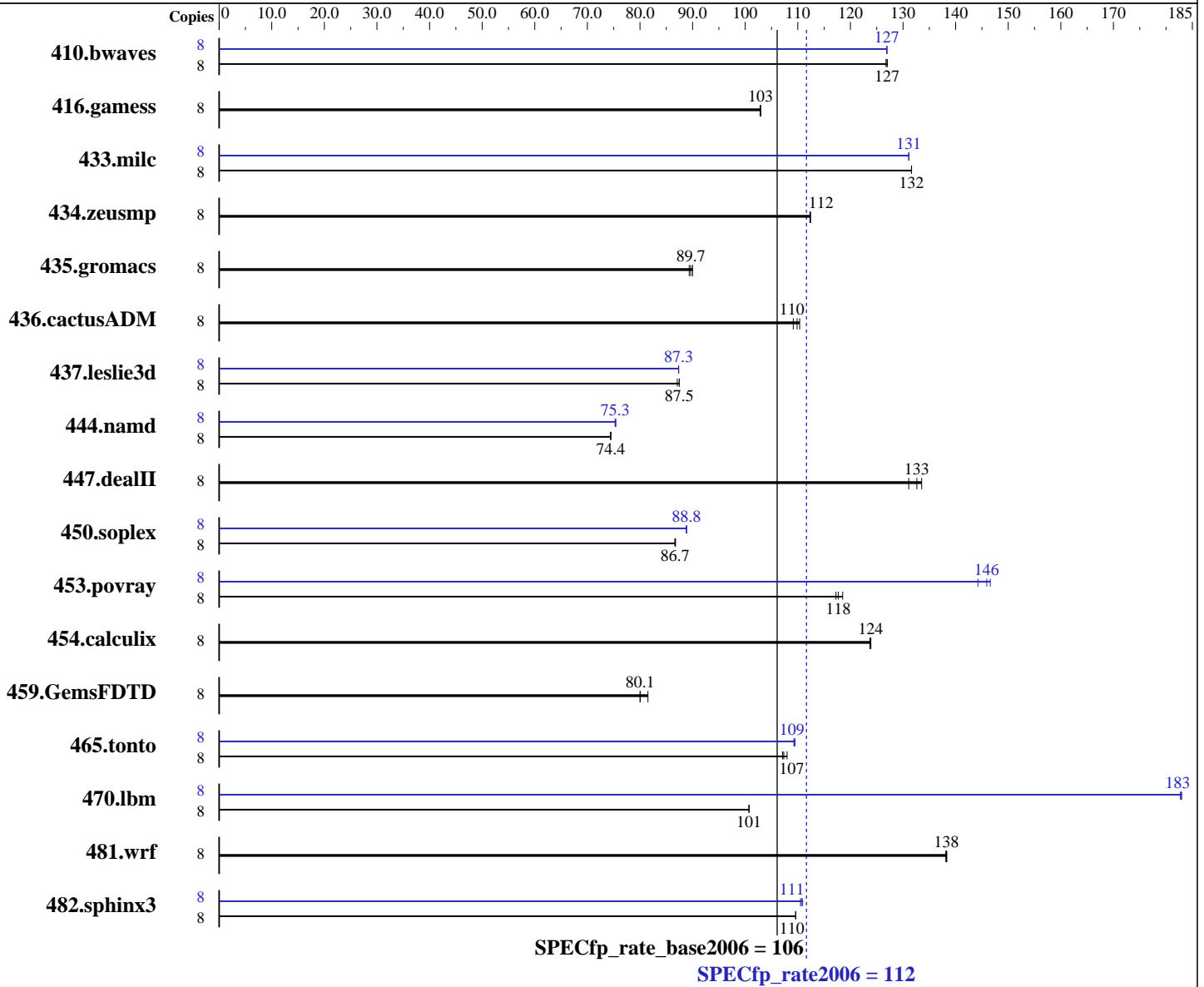
Test sponsor: HITACHI

Tested by: HITACHI

Test date: Apr-2011

Hardware Availability: Feb-2011

Software Availability: Jan-2011



Hardware

CPU Name: Intel Xeon E5603
 CPU Characteristics:
 CPU MHz: 1600
 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: 256 KB I+D on chip per core

Continued on next page

Software

Operating System: Red Hat Enterprise Linux
 Server release 5.4.3, Advanced Platform,
 Kernel 2.6.18-164.9.1.el5 on an x86_64
 Compiler: Intel C++ Compiler XE for Linux
 Version 12.0.2.137 Build 20110112
 Intel Fortran Compiler XE for Linux
 Version 12.0.2.137 Build 20110112
 Auto Parallel: No
 File System: ext3

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

SPECfp_rate2006 = 112

BladeSymphony BS320 (Intel Xeon E5603)

SPECfp_rate_base2006 = 106

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Apr-2011

Hardware Availability: Feb-2011

Software Availability: Jan-2011

L3 Cache: 4 MB I+D on chip per chip
 Other Cache: None
 Memory: 48 GB (6 x 8 GB 2Rx4 PC3-10600R-9, ECC, running at 1066 MHz)
 Disk Subsystem: 2 x 147 GB 10000 rpm SAS RAID1 configuration
 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 | | | | | | |
|---------------|--------|-------------|-------------|------------|------------|-------------|-------------|--------|-------------|-------------|------------|-------------|-------------|-------------|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves | 8 | 858 | 127 | 856 | 127 | 856 | 127 | 8 | 857 | 127 | 857 | 127 | 857 | 127 |
| 416.gamess | 8 | 1522 | 103 | 1522 | 103 | 1523 | 103 | 8 | 1522 | 103 | 1522 | 103 | 1523 | 103 |
| 433.milc | 8 | 558 | 132 | 558 | 132 | 558 | 132 | 8 | 560 | 131 | 560 | 131 | 560 | 131 |
| 434.zeusmp | 8 | 648 | 112 | 648 | 112 | 648 | 112 | 8 | 648 | 112 | 648 | 112 | 648 | 112 |
| 435.gromacs | 8 | 635 | 90.0 | 639 | 89.4 | 637 | 89.7 | 8 | 635 | 90.0 | 639 | 89.4 | 637 | 89.7 |
| 436.cactusADM | 8 | 866 | 110 | 870 | 110 | 876 | 109 | 8 | 866 | 110 | 870 | 110 | 876 | 109 |
| 437.leslie3d | 8 | 860 | 87.5 | 860 | 87.5 | 863 | 87.1 | 8 | 861 | 87.3 | 861 | 87.3 | 861 | 87.4 |
| 444.namd | 8 | 862 | 74.5 | 862 | 74.4 | 862 | 74.4 | 8 | 851 | 75.4 | 852 | 75.3 | 852 | 75.3 |
| 447.dealII | 8 | 690 | 133 | 685 | 134 | 698 | 131 | 8 | 690 | 133 | 685 | 134 | 698 | 131 |
| 450.soplex | 8 | 770 | 86.7 | 770 | 86.6 | 769 | 86.8 | 8 | 751 | 88.8 | 751 | 88.9 | 751 | 88.8 |
| 453.povray | 8 | 362 | 118 | 359 | 119 | 363 | 117 | 8 | 290 | 147 | 295 | 144 | 292 | 146 |
| 454.calculix | 8 | 533 | 124 | 533 | 124 | 534 | 124 | 8 | 533 | 124 | 533 | 124 | 534 | 124 |
| 459.GemsFDTD | 8 | 1061 | 80.0 | 1041 | 81.5 | 1060 | 80.1 | 8 | 1061 | 80.0 | 1041 | 81.5 | 1060 | 80.1 |
| 465.tonto | 8 | 733 | 107 | 729 | 108 | 735 | 107 | 8 | 720 | 109 | 719 | 109 | 720 | 109 |
| 470.lbm | 8 | 1091 | 101 | 1092 | 101 | 1091 | 101 | 8 | 602 | 183 | 601 | 183 | 601 | 183 |
| 481.wrf | 8 | 646 | 138 | 646 | 138 | 647 | 138 | 8 | 646 | 138 | 646 | 138 | 647 | 138 |
| 482.sphinx3 | 8 | 1423 | 110 | 1423 | 110 | 1422 | 110 | 8 | 1411 | 111 | 1406 | 111 | 1409 | 111 |

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

Submit Notes

The config file option 'submit' was used.
 '/usr/bin/numactl' used to bind processes to CPUs

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
 Large pages were disabled for this run



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

SPECfp_rate2006 = 112

BladeSymphony BS320 (Intel Xeon E5603)

SPECfp_rate_base2006 = 106

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Apr-2011

Hardware Availability: Feb-2011

Software Availability: Jan-2011

Platform Notes

BIOS Settings:
Data Reuse Optimization = Disabled

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.deallI: -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:

-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

SPECfp_rate2006 = 112

BladeSymphony BS320 (Intel Xeon E5603)

SPECfp_rate_base2006 = 106

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Apr-2011

Hardware Availability: Feb-2011

Software Availability: Jan-2011

Base Optimization Flags (Continued)

Fortran benchmarks:

`-xSSE4.2 -ipo -O3 -no-prec-div -static`

Benchmarks using both Fortran and C:

`-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias`

Peak Compiler Invocation

C benchmarks (except as noted below):

`icc -m64`

`482.sphinx3: icc -m32`

C++ benchmarks (except as noted below):

`icpc -m64`

`450.soplex: icpc -m32`

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.deallI: `-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`



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

SPECfp_rate2006 = 112

BladeSymphony BS320 (Intel Xeon E5603)

SPECfp_rate_base2006 = 106

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Apr-2011

Hardware Availability: Feb-2011

Software Availability: Jan-2011

Peak Optimization Flags

C benchmarks:

433.milc: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3
-ansi-alias -opt-prefetch -static -auto-ilp32

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2

C++ benchmarks:

444.namd: -xSSE4.2(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: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

459.GemsFDTD: basepeak = yes

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll4 -auto -inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

SPECfp_rate2006 = 112

BladeSymphony BS320 (Intel Xeon E5603)

SPECfp_rate_base2006 = 106

CPU2006 license: 35

Test sponsor: HITACHI

Tested by: HITACHI

Test date: Apr-2011

Hardware Availability: Feb-2011

Software Availability: Jan-2011

Peak Optimization Flags (Continued)

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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-ic12.0-linux64-revB.html>

<http://www.spec.org/cpu2006/flags/PlatformHitachi.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml>

<http://www.spec.org/cpu2006/flags/PlatformHitachi.xml>

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 v1.1.
Report generated on Wed Jul 23 20:52:38 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 10 May 2011.