



SPEC[®] CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECfp[®]_rate2006 = 51.3

Proliant DL585 G2 (AMD Opteron 8222 SE)

SPECfp_rate_base2006 = 48.4

CPU2006 license: 3

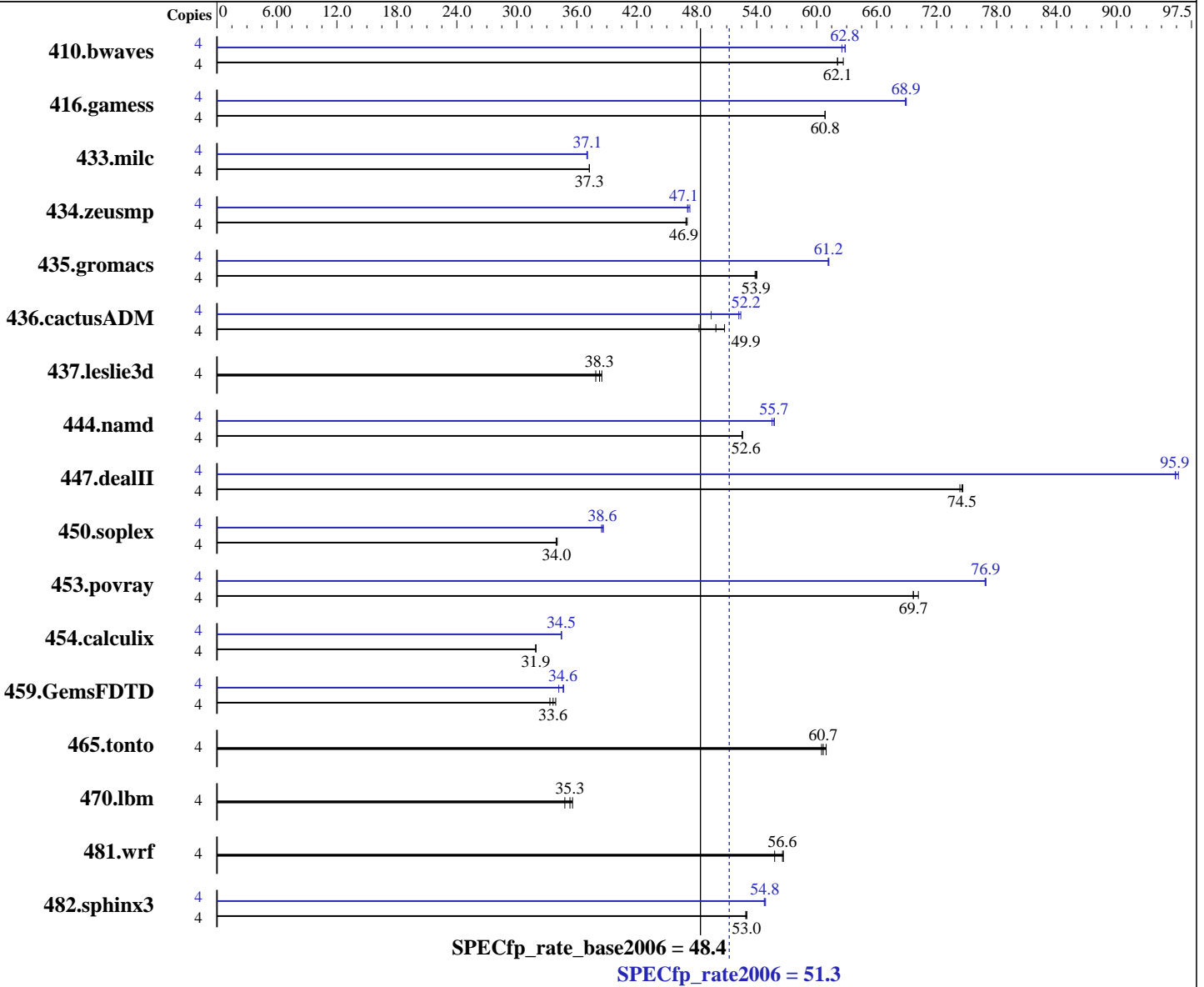
Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Apr-2007

Hardware Availability: May-2007

Software Availability: Mar-2007



Hardware

CPU Name: AMD Opteron 8222 SE
 CPU Characteristics:
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 2,4 chips
 Primary Cache: 64 KB I + 64 KB D on chip per core
 Secondary Cache: 1 MB I+D on chip per core

Continued on next page

Software

Operating System: SuSE Linux Enterprise Server 10 (x86_64)
 SuSE kernel 2.6.16.21-0.8-mp
 Compiler: QLogic PathScale
 Compiler Suite, Release 3.0
 Auto Parallel: No
 File System: ext2
 System State: Multi-user run level 3
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECfp_rate2006 = 51.3

Proliant DL585 G2 (AMD Opteron 8222 SE)

SPECfp_rate_base2006 = 48.4

CPU2006 license: 3

Test date: Apr-2007

Test sponsor: Hewlett-Packard Company

Hardware Availability: May-2007

Tested by: Hewlett-Packard Company

Software Availability: Mar-2007

L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB, PC2-5300P CL5)
Disk Subsystem: 72 GB 10 K SAS
Other Hardware: None

Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	867	62.7	876	62.1	876	62.1	4	869	62.5	865	62.8	865	62.9
416.gamess	4	1287	60.8	1287	60.9	1287	60.8	4	1136	68.9	1136	69.0	1137	68.9
433.milc	4	986	37.2	985	37.3	985	37.3	4	991	37.1	991	37.1	992	37.0
434.zeusmp	4	774	47.1	775	46.9	776	46.9	4	773	47.1	769	47.3	772	47.1
435.gromacs	4	530	53.8	529	53.9	529	54.0	4	467	61.2	466	61.2	467	61.2
436.cactusADM	4	941	50.8	991	48.2	958	49.9	4	967	49.4	912	52.4	915	52.2
437.leslie3d	4	977	38.5	992	37.9	982	38.3	4	977	38.5	992	37.9	982	38.3
444.namd	4	611	52.5	610	52.6	610	52.6	4	576	55.7	575	55.8	578	55.5
447.dealII	4	613	74.6	614	74.5	616	74.3	4	476	96.2	477	95.9	477	95.9
450.soplex	4	983	33.9	980	34.0	982	34.0	4	867	38.5	863	38.7	865	38.6
453.povray	4	305	69.7	303	70.2	305	69.7	4	277	76.9	277	76.9	277	76.9
454.calculix	4	1034	31.9	1035	31.9	1034	31.9	4	957	34.5	958	34.5	958	34.4
459.GemsFDTD	4	1252	33.9	1274	33.3	1262	33.6	4	1241	34.2	1223	34.7	1226	34.6
465.tonto	4	649	60.7	651	60.5	646	61.0	4	649	60.7	651	60.5	646	61.0
470.lbm	4	1579	34.8	1556	35.3	1545	35.6	4	1579	34.8	1556	35.3	1545	35.6
481.wrf	4	788	56.7	790	56.6	801	55.8	4	788	56.7	790	56.6	801	55.8
482.sphinx3	4	1472	53.0	1470	53.0	1474	52.9	4	1424	54.8	1422	54.8	1421	54.9

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

Platform Notes

Node interleaving is disabled
taskset utility used to bind CPU(s) to processes
ulimit -s unlimited set

Base Compiler Invocation

C benchmarks:
pathcc

C++ benchmarks:
pathCC

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECfp_rate2006 = 51.3

Proliant DL585 G2 (AMD Opteron 8222 SE)

SPECfp_rate_base2006 = 48.4

CPU2006 license: 3

Test date: Apr-2007

Test sponsor: Hewlett-Packard Company

Hardware Availability: May-2007

Tested by: Hewlett-Packard Company

Software Availability: Mar-2007

Base Compiler Invocation (Continued)

Fortran benchmarks:
pathf95

Benchmarks using both Fortran and C:
pathcc pathf95

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
 436.cactusADM: -DSPEC_CPU_LP64 -fno-second-underscore
 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
 459.GemsFDTD: -DSPEC_CPU_LP64
 465.tonto: -DSPEC_CPU_LP64
 470.lbm: -DSPEC_CPU_LP64
 481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX -fno-second-underscore
 482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-Ofast

C++ benchmarks:
-Ofast

Fortran benchmarks:
-Ofast -OPT:malloc_alg=1

Benchmarks using both Fortran and C:
-Ofast -OPT:malloc_alg=1

Peak Compiler Invocation

C benchmarks:
pathcc

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECfp_rate2006 = 51.3

Proliant DL585 G2 (AMD Opteron 8222 SE)

SPECfp_rate_base2006 = 48.4

CPU2006 license: 3

Test date: Apr-2007

Test sponsor: Hewlett-Packard Company

Hardware Availability: May-2007

Tested by: Hewlett-Packard Company

Software Availability: Mar-2007

Peak Compiler Invocation (Continued)

C++ benchmarks:
pathCC

Fortran benchmarks:
pathf95

Benchmarks using both Fortran and C:
pathcc pathf95

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
436.cactusADM: -DSPEC_CPU_LP64 -fno-second-underscore
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX -fno-second-underscore
482.sphinx3: -DSPEC_CPU_LP64

```

Peak Optimization Flags

C benchmarks:

433.milc: -Ofast -CG:cflow=off -LNO:prefetch=1 -OPT:malloc_alg=1

470.lbm: basepeak = yes

482.sphinx3: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -O3
-OPT:Ofast -WOPT:aggstr=0 -m32

C++ benchmarks:

444.namd: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -Ofast
-fno-exceptions

447.deallI: -Ofast -static -INLINE:aggressive=on -OPT:malloc_alg=1
-m32 -fno-exceptions

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECfp_rate2006 = 51.3

Proliant DL585 G2 (AMD Opteron 8222 SE)

SPECfp_rate_base2006 = 48.4

CPU2006 license: 3

Test date: Apr-2007

Test sponsor: Hewlett-Packard Company

Hardware Availability: May-2007

Tested by: Hewlett-Packard Company

Software Availability: Mar-2007

Peak Optimization Flags (Continued)

450.soplex: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -m32 -O3
-OPT:IEEE_arith=3 -CG:load_exe=0 -CG:movnti=1
-LNO:minvariant=off -LNO:prefetch=1 -fno-exceptions

453.povray: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -Ofast
-fno-fast-math

Fortran benchmarks:

410.bwaves: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -O3
-OPT:Ofast -OPT:IEEE_arith=3 -LNO:blocking=off
-LNO:ignore_feedback=off

416.gamess: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -O2
-OPT:Ofast -OPT:ro=3 -OPT:unroll_size=256

434.zeusmp: -Ofast -CG:local_fwd_sched=on -LNO:blocking=off
-LNO:interchange=off -LNO:fu=10 -LNO:full_unroll_outer=on

437.leslie3d: basepeak = yes

459.GemsFDTD: -Ofast -LNO:fission=2 -LNO:prefetch=0

465.tonto: basepeak = yes

Benchmarks using both Fortran and C:

435.gromacs: -O3 -OPT:rsqrt=2 -OPT:ro=3

436.cactusADM: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -O3
-LNO:prefetch=3 -LNO:prefetch_ahead=5 -LNO:ou_prod_max=10
-LNO:full_unroll=5 -ipa

454.calculix: -Ofast -LNO:simd=0 -WOPT:mem_opnds=on

481.wrf: basepeak = yes

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.16.html

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.16.xml



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECfp_rate2006 = 51.3

Proliant DL585 G2 (AMD Opteron 8222 SE)

SPECfp_rate_base2006 = 48.4

CPU2006 license: 3

Test date: Apr-2007

Test sponsor: Hewlett-Packard Company

Hardware Availability: May-2007

Tested by: Hewlett-Packard Company

Software Availability: Mar-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 Sep 13 11:20:30 2016 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 15 May 2007.