SPEC® CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Hewlett-Packard Company

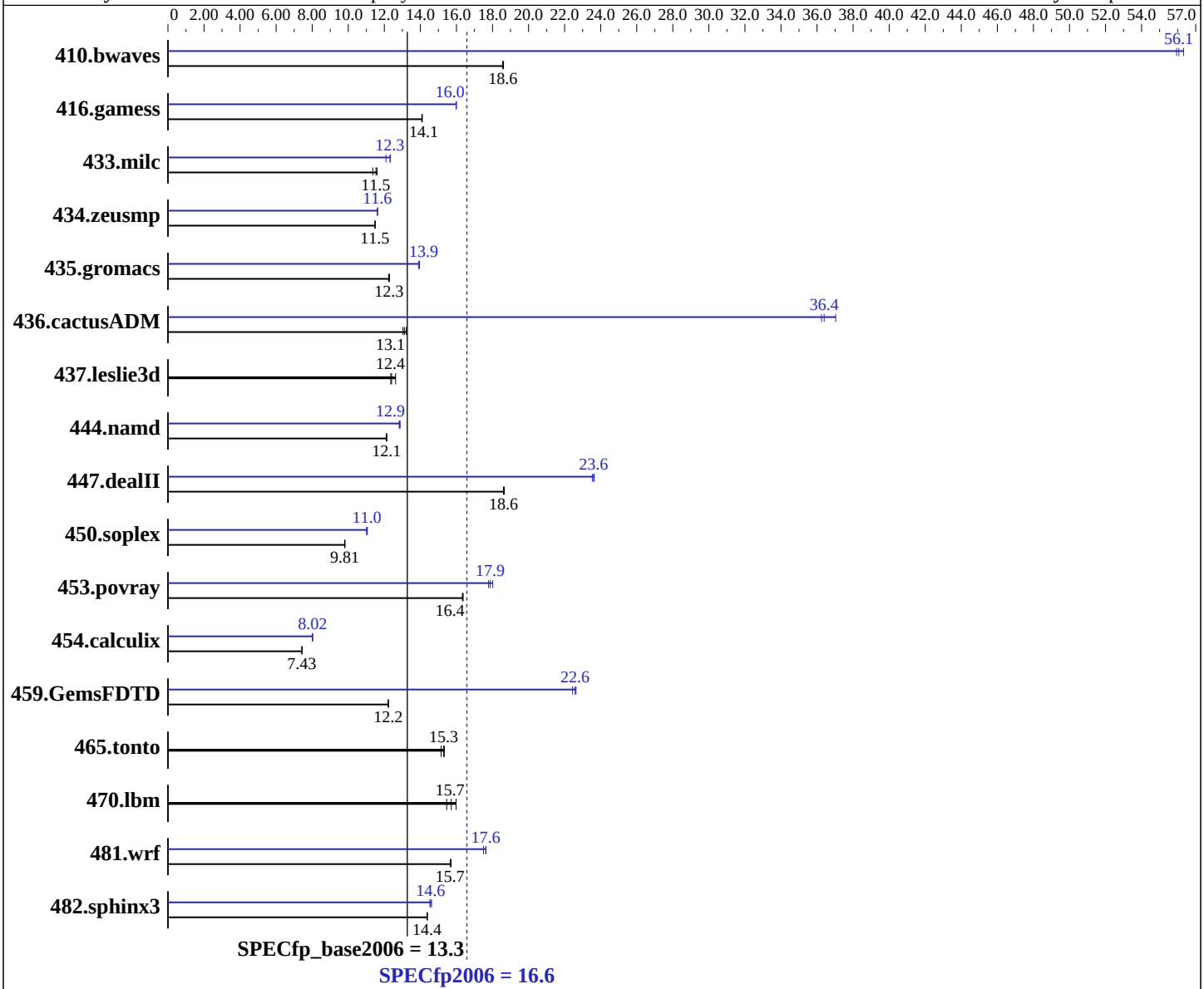
Proliant DL365 (AMD Opteron 2220)

SPECfp®2006 = 16.6

SPECfp_base2006 = 13.3

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: May-2007
Hardware Availability: Oct-2006
Software Availability: Apr-2007



Hardware

CPU Name:	AMD Opteron 2220
CPU Characteristics:	
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 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-smp
Compiler:	QLogic PathScale Compiler Suite, Release 3.0
Auto Parallel:	Yes
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

Proliant DL365 (AMD Opteron 2220)

SPECfp2006 = 16.6

SPECfp_base2006 = 13.3

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: May-2007
Hardware Availability: Oct-2006
Software Availability: Apr-2007

L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB, PC2-5300P CL5)
Disk Subsystem: 1x72 GB 10 K SAS
Other Hardware: None

Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	730	18.6	732	18.6	**731**	**18.6**	243	55.9	241	56.3	**242**	**56.1**
416.gamess	1391	14.1	**1390**	**14.1**	1388	14.1	**1225**	**16.0**	1225	16.0	1224	16.0
433.milc	808	11.4	**796**	**11.5**	791	11.6	759	12.1	**746**	**12.3**	744	12.3
434.zeusmp	792	11.5	**792**	**11.5**	792	11.5	**783**	**11.6**	783	11.6	782	11.6
435.gromacs	584	12.2	**582**	**12.3**	581	12.3	**512**	**13.9**	512	14.0	513	13.9
436.cactusADM	916	13.0	904	13.2	**912**	**13.1**	**328**	**36.4**	323	37.0	330	36.2
437.leslie3d	745	12.6	**758**	**12.4**	761	12.4	745	12.6	**758**	**12.4**	761	12.4
444.namd	663	12.1	**661**	**12.1**	661	12.1	**624**	**12.9**	623	12.9	625	12.8
447.dealII	613	18.7	615	18.6	**614**	**18.6**	486	23.5	484	23.6	**485**	**23.6**
450.soplex	851	9.80	**850**	**9.81**	850	9.82	754	11.1	**756**	**11.0**	757	11.0
453.povray	326	16.3	**325**	**16.4**	325	16.4	299	17.8	**298**	**17.9**	295	18.0
454.calculix	**1110**	**7.43**	1111	7.43	1110	7.43	1029	8.02	1028	8.02	**1029**	**8.02**
459.GemsFDTD	867	12.2	**868**	**12.2**	868	12.2	469	22.6	**470**	**22.6**	473	22.4
465.tonto	650	15.1	**644**	**15.3**	642	15.3	650	15.1	**644**	**15.3**	642	15.3
470.lbm	860	16.0	**875**	**15.7**	889	15.5	860	16.0	**875**	**15.7**	889	15.5
481.wrf	713	15.7	712	15.7	**713**	**15.7**	633	17.6	638	17.5	**634**	**17.6**
482.sphinx3	1356	14.4	**1355**	**14.4**	1355	14.4	1342	14.5	1333	14.6	**1338**	**14.6**

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

Platform Notes

```
Node interleaving is disabled
ulimit -s unlimited set
```

Base Compiler Invocation

C benchmarks:
`pathcc`

C++ benchmarks:
`pathCC`

Continued on next page

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

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

Continued on next page

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: `-Ofast -apo`

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: `Same as 410.bwaves`

465.tonto: `basepeak = yes`

Benchmarks using both Fortran and C:

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

436.cactusADM: `-Ofast -apo`

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

481.wrf: `Same as 436.cactusADM`

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 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 11:21:54 2016 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 26 June 2007.