



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECfp®2006 = 25.2

ProLiant DL320 G5p
(3.00 GHz, Intel Xeon X3370)

SPECfp_base2006 = 24.3

CPU2006 license: 3

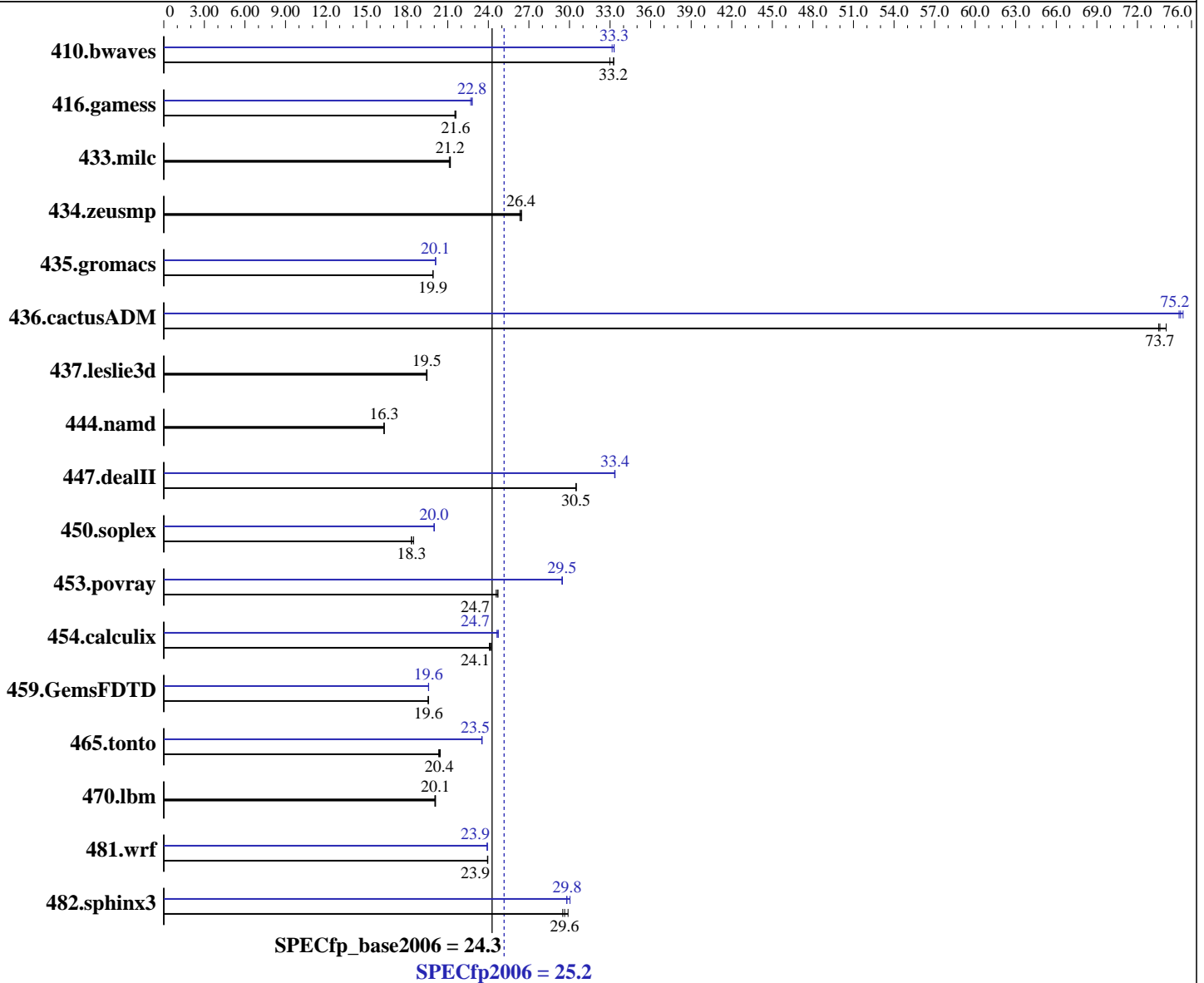
Test date: Sep-2008

Test sponsor: Hewlett-Packard Company

Hardware Availability: Sep-2008

Tested by: Hewlett-Packard Company

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon X3370
 CPU Characteristics: 3.0 GHz, 2x6MB L2 shared, 1333 MHz system bus
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 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) SP1, Kernel 2.6.16.46-0.12-smp
 Compiler: Intel C++ and Fortran Compiler 10.1 for Linux Build 20080730 Package ID: l_cproc_b_11.0.042, l_fproc_b_11.0.042
 Auto Parallel: Yes
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECfp2006 = **25.2**

ProLiant DL320 G5p
(3.00 GHz, Intel Xeon X3370)

SPECfp_base2006 = **24.3**

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

Test date: Sep-2008
Hardware Availability: Sep-2008
Software Availability: Nov-2008

L3 Cache: None
Other Cache: None
Memory: 8 GB(4x2 GB PC2-6400E CL6)
Disk Subsystem: 250 GB 7.2 K SATA
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: Binutils 2.18.50.0.7.20080502

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	412	33.0	408	33.3	409	33.2	408	33.3	408	33.3	410	33.2
416.gamess	908	21.6	910	21.5	907	21.6	863	22.7	859	22.8	858	22.8
433.milc	433	21.2	433	21.2	435	21.1	433	21.2	433	21.2	435	21.1
434.zeusmp	346	26.3	344	26.4	344	26.5	346	26.3	344	26.4	344	26.5
435.gromacs	359	19.9	359	19.9	359	19.9	355	20.1	355	20.1	356	20.1
436.cactusADM	162	73.6	161	74.1	162	73.7	159	75.1	159	75.4	159	75.2
437.leslie3d	484	19.4	483	19.5	483	19.5	484	19.4	483	19.5	483	19.5
444.namd	492	16.3	493	16.3	492	16.3	492	16.3	493	16.3	492	16.3
447.dealII	375	30.5	375	30.5	375	30.5	343	33.3	343	33.4	343	33.4
450.soplex	451	18.5	455	18.3	455	18.3	417	20.0	417	20.0	417	20.0
453.povray	216	24.7	216	24.6	215	24.7	181	29.4	180	29.5	181	29.5
454.calculix	342	24.1	343	24.1	341	24.2	335	24.6	334	24.7	334	24.7
459.GemsFDTD	542	19.6	543	19.5	542	19.6	542	19.6	542	19.6	542	19.6
465.tonto	481	20.4	483	20.4	484	20.3	418	23.5	419	23.5	418	23.5
470.lbm	685	20.0	684	20.1	684	20.1	685	20.0	684	20.1	684	20.1
481.wrf	466	24.0	467	23.9	466	23.9	467	23.9	467	23.9	467	23.9
482.sphinx3	652	29.9	657	29.6	661	29.5	649	30.0	654	29.8	654	29.8

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 and 482.sphinx3, at peak, are compiled in 32-bit mode
OMP_NUM_THREADS set to number of processors
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 200M

Base Compiler Invocation

C benchmarks:
icc

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECfp2006 = 25.2

ProLiant DL320 G5p
(3.00 GHz, Intel Xeon X3370)

SPECfp_base2006 = 24.3

CPU2006 license: 3

Test date: Sep-2008

Test sponsor: Hewlett-Packard Company

Hardware Availability: Sep-2008

Tested by: Hewlett-Packard Company

Software Availability: Nov-2008

Base Compiler Invocation (Continued)

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:
-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

C++ benchmarks:
-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Fortran benchmarks:
-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:
-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant DL320 G5p
(3.00 GHz, Intel Xeon X3370)

SPECfp2006 = 25.2

SPECfp_base2006 = 24.3

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Sep-2008

Hardware Availability: Sep-2008

Software Availability: Nov-2008

Peak Compiler Invocation

C benchmarks (except as noted below):

icc

```
482.sphinx3: /opt/intel/Compiler/11.0/042/bin/ia32/icc
             -L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
             -I/opt/intel/Compiler/11.0/042/ipp/ia32/include
```

C++ benchmarks (except as noted below):

icpc

```
450.soplex: /opt/intel/Compiler/11.0/042/bin/ia32/icpc
            -L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
            -I/opt/intel/Compiler/11.0/042/ipp/ia32/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
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
```

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant DL320 G5p
(3.00 GHz, Intel Xeon X3370)

SPECfp2006 = 25.2

SPECfp_base2006 = 24.3

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Sep-2008

Hardware Availability: Sep-2008

Software Availability: Nov-2008

Peak Optimization Flags (Continued)

482.sphinx3: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2

C++ benchmarks:

444.namd: basepeak = yes

447.dealIII: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll2 -ansi-alias -scalar-rep-
-opt-prefetch

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -opt-malloc-options=3

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

Fortran benchmarks:

410.bwaves: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
-parallel

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll2 -Ob0 -ansi-alias
-scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll2 -Ob0 -opt-prefetch
-parallel

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -opt-prefetch -auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll2 -opt-prefetch -parallel
-auto-ilp32

454.calculix: -xSSE4.1 -ipo -O3 -no-prec-div -static -auto-ilp32

481.wrf: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
-parallel -auto-ilp32



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant DL320 G5p
(3.00 GHz, Intel Xeon X3370)

SPECfp2006 = 25.2

SPECfp_base2006 = 24.3

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Sep-2008

Hardware Availability: Sep-2008

Software Availability: Nov-2008

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20090713.html>

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revD.20090713.00.html>

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

<http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20090713.xml>

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revD.20090713.00.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 Tue Jul 22 22:13:58 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 14 October 2008.