SPEC® CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge T610 (Intel Xeon E5540, 2.53 GHz)

$SPECfp^®_rate2006 = $ 166

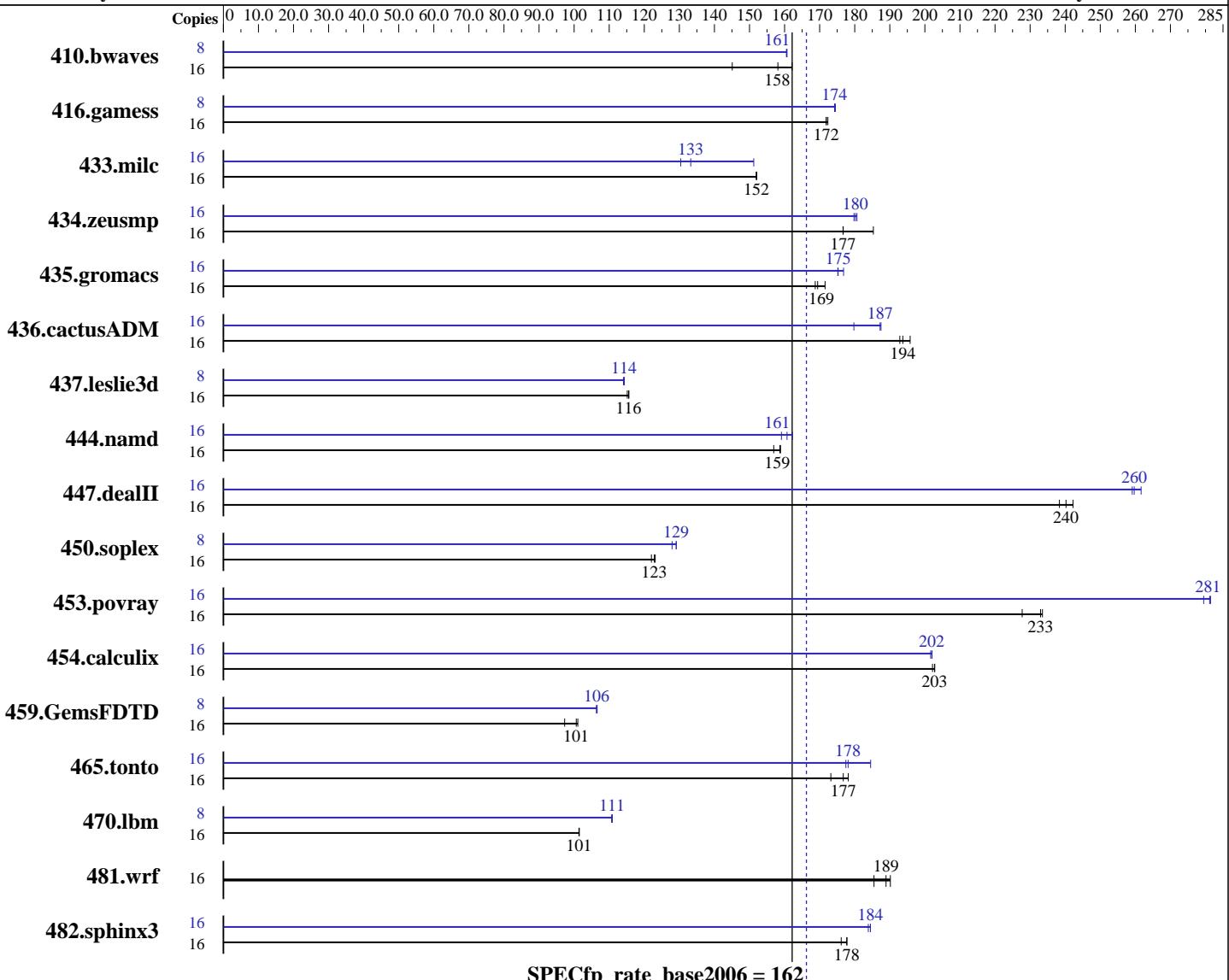SPECfp_rate_base2006 = 162

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Mar-2009
Hardware Availability: Mar-2009
Software Availability: Feb-2009

Benchmark	Copies	Result (base)	Result (peak)
410.bwaves	8		161
410.bwaves	16	158	
416.gamess	8		174
416.gamess	16	172	
433.milc	16		133
433.milc	16	152	
434.zeusmp	16		180
434.zeusmp	16	177	
435.gromacs	16		175
435.gromacs	16	169	
436.cactusADM	16		187
436.cactusADM	16	194	
437.leslie3d	8		114
437.leslie3d	16	116	
444.namd	16		161
444.namd	16	159	
447.dealII	16		260
447.dealII	16	240	
450.soplex	8		129
450.soplex	16	123	
453.povray	16		281
453.povray	16	233	
454.calculix	16		202
454.calculix	16	203	
459.GemsFDTD	8		106
459.GemsFDTD	16	101	
465.tonto	16		178
465.tonto	16	177	
470.lbm	8		111
470.lbm	16	101	
481.wrf	16	189	
482.sphinx3	16		184
482.sphinx3	16	178	

SPECfp_rate_base2006 = 162

SPECfp_rate2006 = 166

Hardware

CPU Name: Intel Xeon E5540
CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
CPU MHz: 2533
FPU: Integrated
CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core
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: SUSE Linux Enterprise Server 10 (x86_64) SP2, Kernel 2.6.16.60-0.21-smp
Compiler: Intel C++ and Fortran Compiler Professional 11.0 for Linux
Build 20090131 Package ID: l_cproc_p_11.0.080, l_cprof_p_11.0.080
Auto Parallel: No
File System: ReiserFS
System State: Run level 3 (multi-user)

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge T610 (Intel Xeon E5540, 2.53 GHz)

SPECfp_rate2006 =	166
SPECfp_rate_base2006 =	**162**

CPU2006 license: 55		**Test date:**	Mar-2009
Test sponsor: Dell Inc.		**Hardware Availability:**	Mar-2009
Tested by: Dell Inc.		**Software Availability:**	Feb-2009

L3 Cache:	8 MB I+D on chip per chip	Base Pointers:	64-bit
Other Cache:	None	Peak Pointers:	32/64-bit
Memory:	24 GB (6 x 4 GB DDR3-1067 DR RDIMM)	Other Software:	Binutils 2.18.50.0.7.20080502
Disk Subsystem:	1 x 146 GB 15000 RPM SAS		
Other Hardware:	None		

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	16	1499	145	**1375**	**158**	1341	162	8	**677**	**161**	677	161	677	161
416.gamess	16	1823	172	1818	172	**1823**	**172**	8	898	174	**899**	**174**	899	174
433.milc	16	966	152	967	152	**966**	**152**	16	971	151	1126	130	**1102**	**133**
434.zeusmp	16	786	185	824	177	**824**	**177**	16	810	180	**808**	**180**	806	181
435.gromacs	16	677	169	666	172	**674**	**169**	16	646	177	652	175	**652**	**175**
436.cactusADM	16	977	196	991	193	**987**	**194**	16	**1021**	**187**	1064	180	1020	187
437.leslie3d	16	**1301**	**116**	1306	115	1301	116	8	658	114	659	114	**658**	**114**
444.namd	16	808	159	**809**	**159**	818	157	16	**799**	**161**	807	159	791	162
447.dealII	16	768	238	756	242	**762**	**240**	16	706	259	**705**	**260**	700	262
450.soplex	16	1084	123	1094	122	**1086**	**123**	8	522	128	**517**	**129**	517	129
453.povray	16	**365**	**233**	374	228	365	234	16	**303**	**281**	305	279	302	281
454.calculix	16	**651**	**203**	651	203	653	202	16	653	202	**654**	**202**	655	202
459.GemsFDTD	16	1745	97.3	**1688**	**101**	1680	101	8	**797**	**106**	798	106	797	107
465.tonto	16	**891**	**177**	884	178	909	173	16	853	185	887	177	**884**	**178**
470.lbm	16	**2168**	**101**	2169	101	2166	101	8	991	111	**992**	**111**	993	111
481.wrf	16	940	190	**946**	**189**	963	185	16	940	190	**946**	**189**	963	185
482.sphinx3	16	1754	178	1770	176	**1754**	**178**	16	1696	184	1690	184	**1691**	**184**

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.
 numactl was used to bind copies to the cores
```

Base Compiler Invocation

C benchmarks:
    icc

C++ benchmarks:
    icpc

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge T610 (Intel Xeon E5540, 2.53 GHz)

SPECfp_rate2006 =   166

SPECfp_rate_base2006 =   162

CPU2006 license: 55			**Test date:**	Mar-2009
Test sponsor:	Dell Inc.		**Hardware Availability:**	Mar-2009
Tested by:	Dell Inc.		**Software Availability:**	Feb-2009

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

C++ benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static
```

Fortran benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static
```

Benchmarks using both Fortran and C:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static
```

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc
```

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge T610 (Intel Xeon E5540, 2.53 GHz)

SPECfp_rate2006 =   166

SPECfp_rate_base2006 =   162

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Mar-2009
Hardware Availability: Mar-2009
Software Availability: Feb-2009

Peak Compiler Invocation (Continued)

482.sphinx3: `icc -m32`

C++ benchmarks (except as noted below):
`icpc`

450.soplex: `icpc -m32`

Fortran benchmarks (except as noted below):
`ifort`

437.leslie3d: `ifort -m32`

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`
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: `-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)`
`-fno-alias`

470.lbm: `-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch`
`-auto-ilp32`

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

Continued on next page

Dell Inc.

PowerEdge T610 (Intel Xeon E5540, 2.53 GHz)

SPECfp_rate2006 =   166

SPECfp_rate_base2006 =   162

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Mar-2009
Hardware Availability: Mar-2009
Software Availability: Feb-2009

Peak Optimization Flags (Continued)

C++ benchmarks:

    444.namd: -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)
        -fno-alias -auto-ilp32

    447.dealII: -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)
        -unroll2 -ansi-alias -scalar-rep-

    450.soplex: -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)
        -opt-malloc-options=3

    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 -ipo -O3 -no-prec-div -static -opt-prefetch

    416.gamess: -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)
        -unroll2 -Ob0 -ansi-alias -scalar-rep-

    434.zeusmp: -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)

    437.leslie3d: -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)
        -opt-malloc-options=3 -opt-prefetch

    459.GemsFDTD: -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)
        -unroll2 -Ob0 -opt-prefetch

    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

Benchmarks using both Fortran and C:

    435.gromacs: -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)
        -opt-prefetch -auto-ilp32

    436.cactusADM: -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)
        -unroll2 -opt-prefetch -auto-ilp32

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge T610 (Intel Xeon E5540, 2.53 GHz)

SPECfp_rate2006 =   166

SPECfp_rate_base2006 =   162

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Mar-2009
Hardware Availability: Mar-2009
Software Availability: Feb-2009

Peak Optimization Flags (Continued)

454.calculix: `-xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32`

481.wrf: `basepeak = yes`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090710.04.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090710.04.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 01:47:44 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 14 April 2009.