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

Dell Inc.

PowerEdge R610
(Intel Xeon E5506, 2.13 GHz)

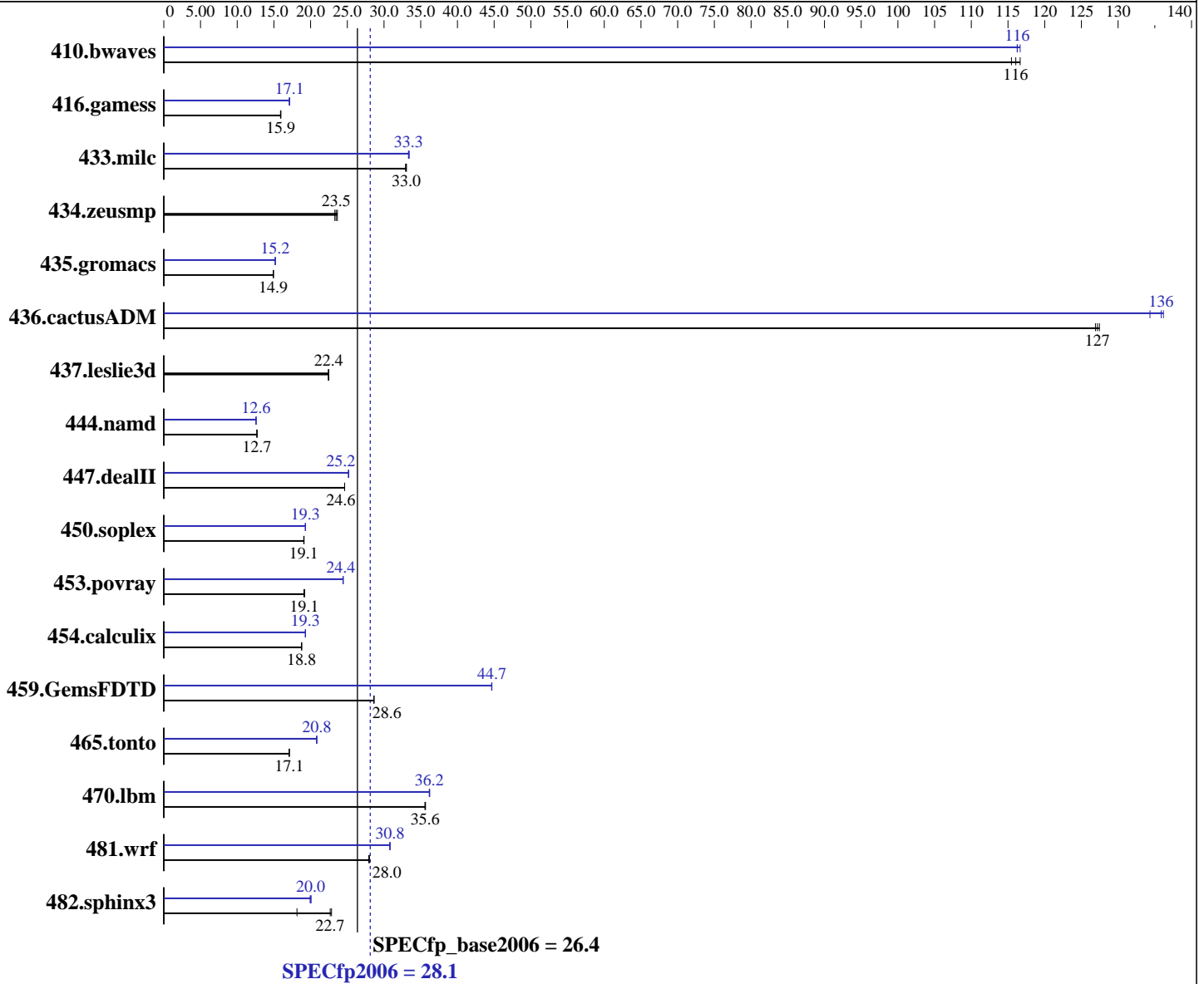$SPECfp^{®}2006 = $ 28.1

$SPECfp_base2006 = $ 26.4

CPU2006 license: 55		**Test date:**	May-2010
Test sponsor:	Dell Inc.	**Hardware Availability:**	Mar-2009
Tested by:	Bull SAS	**Software Availability:**	Dec-2009

0 5.00 10.0 15.0 20.0 25.0 30.0 35.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 100 105 110 115 120 125 130 140

Benchmark	Peak	Base
410.bwaves	116	116
416.gamess	17.1	15.9
433.milc	33.3	33.0
434.zeusmp		23.5
435.gromacs	15.2	14.9
436.cactusADM	136	127
437.leslie3d		22.4
444.namd	12.6	12.7
447.dealII	25.2	24.6
450.soplex	19.3	19.1
453.povray	24.4	19.1
454.calculix	19.3	18.8
459.GemsFDTD	44.7	28.6
465.tonto	20.8	17.1
470.lbm	36.2	35.6
481.wrf	30.8	28.0
482.sphinx3	20.0	22.7

SPECfp_base2006 = 26.4

SPECfp2006 = 28.1

Hardware

CPU Name:	Intel Xeon E5506
CPU Characteristics:	
CPU MHz:	2133
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:	SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
Compiler:	Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l_cproc_p_11.1.064, l_cprof_p_11.1.064
Auto Parallel:	Yes
File System:	ext3
System State:	Run level 3 (multi-user)

Continued on next page

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R610
(Intel Xeon E5506, 2.13 GHz)

SPECfp2006 =	28.1
SPECfp_base2006 =	26.4

CPU2006 license: 55		**Test date:**	May-2010
Test sponsor:	Dell Inc.	**Hardware Availability:**	Mar-2009
Tested by:	Bull SAS	**Software Availability:**	Dec-2009

L3 Cache:	4 MB I+D on chip per chip	Base Pointers:	64-bit
Other Cache:	None	Peak Pointers:	32/64-bit
Memory:	48 GB (12 x 4 GB PC3-10600R, 2 Rank, CL9-9-9, ECC, running at 800 MHz)	Other Software:	None
Disk Subsystem:	1 x 73 GB SAS, 10000 RPM		
Other Hardware:	None		

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	118	115	**117**	**116**	116	117	116	117	**117**	**116**	117	116
416.gamess	1227	16.0	**1229**	**15.9**	1232	15.9	**1143**	**17.1**	1146	17.1	1143	17.1
433.milc	279	32.9	278	33.0	**278**	**33.0**	**275**	**33.3**	275	33.4	275	33.3
434.zeusmp	391	23.3	385	23.6	**388**	**23.5**	391	23.3	385	23.6	**388**	**23.5**
435.gromacs	**478**	**14.9**	479	14.9	478	14.9	470	15.2	**470**	**15.2**	471	15.2
436.cactusADM	94.2	127	**94.0**	**127**	93.8	127	87.8	136	89.0	134	**88.0**	**136**
437.leslie3d	**419**	**22.4**	419	22.4	419	22.4	**419**	**22.4**	419	22.4	419	22.4
444.namd	633	12.7	631	12.7	**632**	**12.7**	638	12.6	638	12.6	**638**	**12.6**
447.dealII	464	24.6	465	24.6	**464**	**24.6**	454	25.2	**454**	**25.2**	455	25.1
450.soplex	437	19.1	**437**	**19.1**	436	19.1	433	19.3	432	19.3	**432**	**19.3**
453.povray	279	19.1	**278**	**19.1**	277	19.2	218	24.5	**218**	**24.4**	218	24.4
454.calculix	439	18.8	440	18.8	**439**	**18.8**	428	19.3	**428**	**19.3**	428	19.3
459.GemsFDTD	371	28.6	371	28.6	**371**	**28.6**	**237**	**44.7**	238	44.7	237	44.7
465.tonto	**576**	**17.1**	575	17.1	576	17.1	472	20.8	473	20.8	**472**	**20.8**
470.lbm	386	35.6	**386**	**35.6**	385	35.7	379	36.2	380	36.2	**380**	**36.2**
481.wrf	400	27.9	**400**	**28.0**	399	28.0	363	30.8	**363**	**30.8**	362	30.8
482.sphinx3	853	22.8	1074	18.1	**860**	**22.7**	971	20.1	978	19.9	**974**	**20.0**

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

General Notes

```
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
KMP_STACKSIZE set to 200M
Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502
The Dell PowerEdge R610 and
the Bull NovaScale R440 F2 models are electronically equivalent.
The results have been measured on a Bull NovaScale R440 F2 model.
```

Base Compiler Invocation

C benchmarks:
```
icc  -m64
```

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R610
(Intel Xeon E5506, 2.13 GHz)

SPECfp2006 =	28.1
SPECfp_base2006 =	26.4

CPU2006 license:	55		**Test date:**	May-2010
Test sponsor:	Dell Inc.		**Hardware Availability:**	Mar-2009
Tested by:	Bull SAS		**Software Availability:**	Dec-2009

Base Compiler Invocation (Continued)

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.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 -parallel -opt-prefetch

C++ benchmarks:
        -xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Fortran benchmarks:
        -xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

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

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R610
(Intel Xeon E5506, 2.13 GHz)

$SPECfp2006 =$ 28.1

$SPECfp\_base2006 =$ 26.4

CPU2006 license: 55		**Test date:**	May-2010
Test sponsor: Dell Inc.		**Hardware Availability:**	Mar-2009
Tested by: Bull SAS		**Software Availability:**	Dec-2009

Peak Compiler Invocation

C benchmarks:
        icc   -m64

C++ benchmarks:
        icpc   -m64

Fortran benchmarks:
        ifort -m64

Benchmarks using both Fortran and C:
        icc   -m64 ifort -m64

Peak Portability Flags

Same as Base Portability Flags

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)
                  -ansi-alias

        470.lbm: -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)
                 -parallel -ansi-alias -auto-ilp32

        482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32
                     -unroll2

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- -auto-ilp32

        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 -auto-ilp32

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R610
(Intel Xeon E5506, 2.13 GHz)

$SPECfp2006 =$ 28.1

$SPECfp\_base2006 =$ 26.4

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

Test date: May-2010
Hardware Availability: Mar-2009
Software Availability: Dec-2009

Peak Optimization Flags (Continued)

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`
`-parallel`

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: `basepeak = yes`

437.leslie3d: `basepeak = yes`

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 -parallel`

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)`
`-inline-calloc -opt-malloc-options=3 -auto -unroll4`

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 -parallel -auto-ilp32`

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

481.wrf: `Same as 454.calculix`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100511.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100511.xml

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R610
(Intel Xeon E5506, 2.13 GHz)

$SPECfp2006 =$ 28.1

$SPECfp\_base2006 =$ 26.4

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 08:33:58 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 22 June 2010.