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

Dell Inc.

PowerEdge M910 (Intel Xeon L7555, 1.87 GHz)

$SPECfp^{®}_rate2006 = $ 242

$SPECfp_rate_base2006 = $ 235

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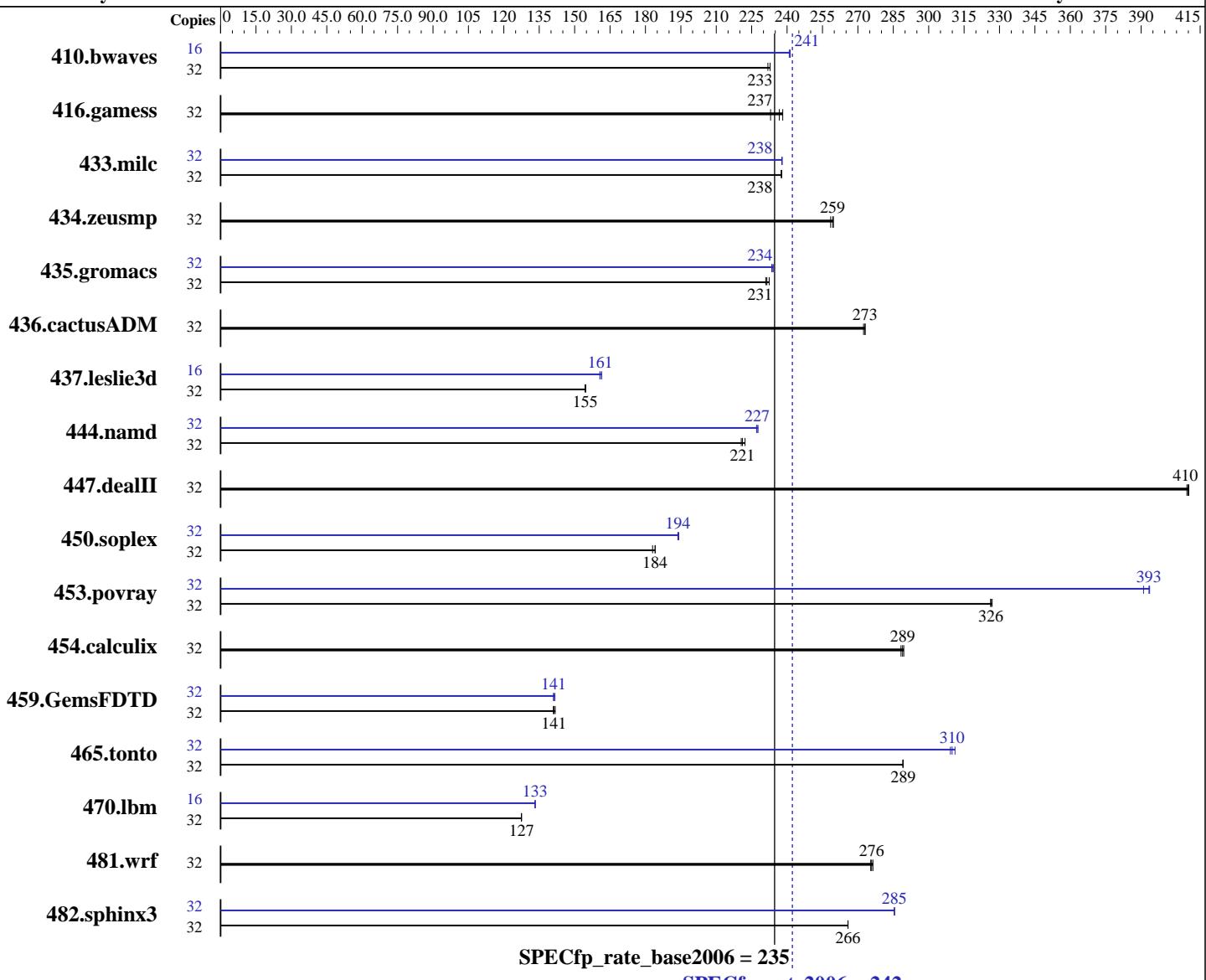**Test sponsor:** Dell Inc.
Tested by: Dell Inc.

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

Copies

Benchmark	Copies	Result
410.bwaves	16	241
	32	233
416.gamess	32	237
433.milc	32	238
	32	238
434.zeusmp	32	259
435.gromacs	32	234
	32	231
436.cactusADM	32	273
437.leslie3d	16	161
	32	155
444.namd	32	227
	32	221
447.dealII	32	410
450.soplex	32	194
	32	184
453.povray	32	393
	32	326
454.calculix	32	289
459.GemsFDTD	32	141
	32	141
465.tonto	32	310
	32	289
470.lbm	16	133
	32	127
481.wrf	32	276
482.sphinx3	32	285
	32	266

SPECfp_rate_base2006 = 235
SPECfp_rate2006 = 242

Hardware

CPU Name: Intel Xeon L7555
CPU Characteristics: Intel Turbo Boost Technology up to 2.53 GHz
CPU MHz: 1867
FPU: Integrated
CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable: 2,4 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-smp
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: No
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 M910 (Intel Xeon L7555, 1.87 GHz)

$SPECfp\_rate2006 =$ 242

$SPECfp\_rate\_base2006 =$ 235

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

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

L3 Cache:	24 MB I+D on chip per chip
Other Cache:	None
Memory:	128 GB (32 x 4 GB DDR3-1066 QR RDIMM, CL7, ECC)
Disk Subsystem:	1 x 146 GB 15000 RPM SAS
Other Hardware:	None

Base Pointers:	64-bit
Peak Pointers:	32/64-bit
Other Software:	None

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	32	**_1868_**	**_233_**	1868	233	1875	232	16	**_901_**	**_241_**	903	241	901	241
416.gamess	32	2689	233	2631	238	**_2647_**	**_237_**	32	2689	233	2631	238	**_2647_**	**_237_**
433.milc	32	1237	238	1236	238	**_1237_**	**_238_**	32	1235	238	**_1235_**	**_238_**	1235	238
434.zeusmp	32	1122	260	**_1123_**	**_259_**	1127	258	32	1122	260	**_1123_**	**_259_**	1127	258
435.gromacs	32	989	231	**_987_**	**_231_**	983	232	32	978	234	976	234	**_977_**	**_234_**
436.cactusADM	32	1400	273	1404	272	**_1401_**	**_273_**	32	1400	273	1404	272	**_1401_**	**_273_**
437.leslie3d	32	1948	154	1944	155	**_1946_**	**_155_**	16	**_935_**	**_161_**	931	161	936	161
444.namd	32	**_1161_**	**_221_**	1163	221	1155	222	32	**_1129_**	**_227_**	1130	227	1127	228
447.dealII	32	**_893_**	**_410_**	894	409	892	410	32	**_893_**	**_410_**	894	409	892	410
450.soplex	32	1449	184	**_1450_**	**_184_**	1458	183	32	**_1377_**	**_194_**	1378	194	1375	194
453.povray	32	521	327	522	326	**_522_**	**_326_**	32	433	394	**_433_**	**_393_**	435	391
454.calculix	32	912	289	916	288	**_914_**	**_289_**	32	912	289	916	288	**_914_**	**_289_**
459.GemsFDTD	32	2408	141	2395	142	**_2404_**	**_141_**	32	2408	141	2397	142	**_2405_**	**_141_**
465.tonto	32	**_1089_**	**_289_**	1089	289	1089	289	32	**_1016_**	**_310_**	1018	309	1012	311
470.lbm	32	**_3449_**	**_127_**	3450	127	3449	127	16	**_1650_**	**_133_**	1649	133	1650	133
481.wrf	32	1298	275	1293	276	**_1296_**	**_276_**	32	1298	275	1293	276	**_1296_**	**_276_**
482.sphinx3	32	2346	266	2347	266	**_2346_**	**_266_**	32	**_2185_**	**_285_**	2184	286	2185	285

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

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

Platform Notes

vm.zone_reclaim_mode = 1 in /etc/sysctl.conf file
BIOS Settings:
Power Management = Maximum Performance (Default = Active Power Controller)

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge M910 (Intel Xeon L7555, 1.87 GHz)

SPECfp_rate2006 =   242

SPECfp_rate_base2006 =   235

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

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

General Notes

    Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502

Base Compiler Invocation

C benchmarks:
    icc   -m64

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

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

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

Continued on next page

Dell Inc.

PowerEdge M910 (Intel Xeon L7555, 1.87 GHz)

SPECfp_rate2006 =   242

SPECfp_rate_base2006 =   235

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

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

Base Optimization Flags (Continued)

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

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc    -m64
```

```
482.sphinx3: icc -m32
```

C++ benchmarks (except as noted below):
```
icpc   -m64
```

```
450.soplex: icpc -m32
```

Fortran benchmarks:
```
ifort -m64
```

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

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:

Continued on next page

Dell Inc.

PowerEdge M910 (Intel Xeon L7555, 1.87 GHz)

SPECfp_rate2006 = 242

SPECfp_rate_base2006 = 235

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

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

Peak Optimization Flags (Continued)

```
 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 -opt-prefetch
```

```
 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)
          -opt-malloc-options=3 -ansi-alias -auto-ilp32
```

```
 482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -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: basepeak = yes
```

```
 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: basepeak = yes
```

```
 434.zeusmp: basepeak = yes
```

```
 437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div -static
```

```
 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
```

```
 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 -inline-calloc -opt-malloc-options=3
```

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
```

Dell Inc.

PowerEdge M910 (Intel Xeon L7555, 1.87 GHz)

SPECfp_rate2006 =   242

SPECfp_rate_base2006 =   235

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

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

Peak Optimization Flags (Continued)

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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-ic11.1-linux64-revE.20100330.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.20100330.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 13:27:24 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 8 July 2010.