



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp<sup>®</sup>2006 = 56.9

PowerEdge T110 II (Intel Xeon E3-1240, 3.30 GHz)

SPECfp\_base2006 = 54.8

CPU2006 license: 55

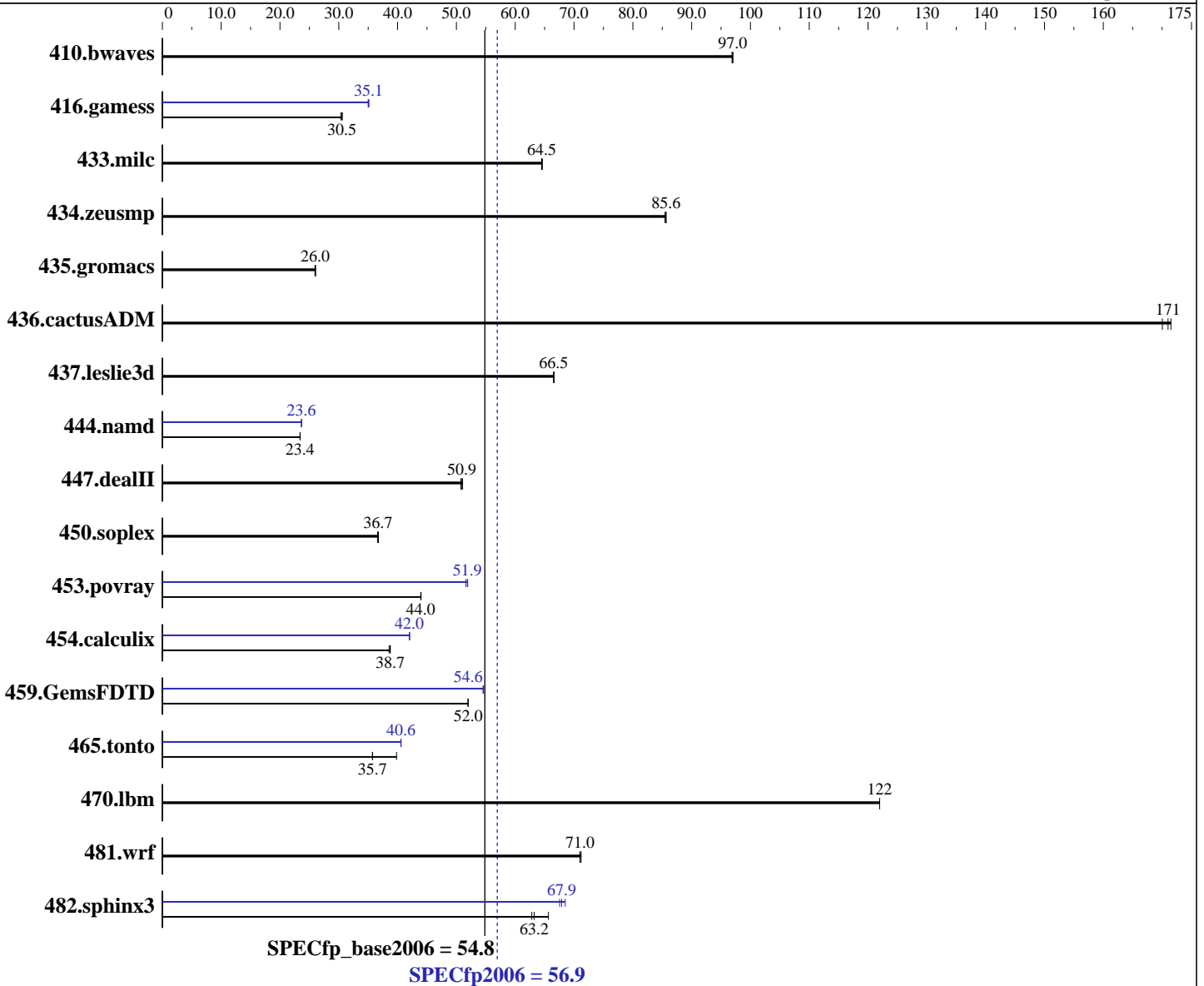
Test date: Mar-2011

Test sponsor: Dell Inc.

Hardware Availability: May-2011

Tested by: Dell Inc.

Software Availability: Apr-2011



### Hardware

CPU Name: Intel Xeon E3-1240  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz  
 CPU MHz: 3300  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core  
 CPU(s) orderable: 1 chip  
 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 SP1 (x86\_64), Kernel 2.6.32.12-0.7-default  
 Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64 Version 12 Alpha Build 20110105  
 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

Dell Inc.

SPECfp2006 = 56.9

PowerEdge T110 II (Intel Xeon E3-1240, 3.30 GHz)

SPECfp\_base2006 = 54.8

CPU2006 license: 55

Test date: Mar-2011

Test sponsor: Dell Inc.

Hardware Availability: May-2011

Tested by: Dell Inc.

Software Availability: Apr-2011

L3 Cache: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 8 GB (4 x 2 GB 2Rx8 PC3-10600R-9, ECC)  
Disk Subsystem: 1 x 146 GB 15000 RPM SAS  
Other Hardware: None

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

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	140	97.0	<b>140</b>	<b>97.0</b>	140	96.9	140	97.0	<b>140</b>	<b>97.0</b>	140	96.9
416.gamess	<b>641</b>	<b>30.5</b>	640	30.6	645	30.3	557	35.1	<b>559</b>	<b>35.1</b>	560	35.0
433.milc	142	64.5	<b>142</b>	<b>64.5</b>	142	64.6	142	64.5	<b>142</b>	<b>64.5</b>	142	64.6
434.zeusmp	<b>106</b>	<b>85.6</b>	106	85.5	106	85.6	<b>106</b>	<b>85.6</b>	106	85.5	106	85.6
435.gromacs	275	26.0	<b>275</b>	<b>26.0</b>	274	26.1	<b>275</b>	<b>26.0</b>	<b>275</b>	<b>26.0</b>	274	26.1
436.cactusADM	<b>69.9</b>	<b>171</b>	70.3	170	69.7	172	<b>69.9</b>	<b>171</b>	70.3	170	69.7	172
437.leslie3d	<b>141</b>	<b>66.5</b>	141	66.6	141	66.5	<b>141</b>	<b>66.5</b>	141	66.6	141	66.5
444.namd	342	23.4	343	23.4	<b>342</b>	<b>23.4</b>	339	23.6	339	23.6	<b>339</b>	<b>23.6</b>
447.dealII	<b>225</b>	<b>50.9</b>	225	50.8	224	51.1	<b>225</b>	<b>50.9</b>	225	50.8	224	51.1
450.soplex	228	36.6	<b>227</b>	<b>36.7</b>	227	36.7	228	36.6	<b>227</b>	<b>36.7</b>	227	36.7
453.povray	121	43.9	<b>121</b>	<b>44.0</b>	121	44.0	102	51.9	<b>103</b>	<b>51.9</b>	103	51.6
454.calculix	<b>213</b>	<b>38.7</b>	213	38.8	214	38.5	<b>196</b>	<b>42.0</b>	196	42.0	196	42.0
459.GemsFDTD	204	52.0	204	52.0	<b>204</b>	<b>52.0</b>	195	54.5	194	54.6	<b>194</b>	<b>54.6</b>
465.tonto	276	35.7	<b>275</b>	<b>35.7</b>	247	39.8	<b>243</b>	<b>40.6</b>	243	40.6	242	40.6
470.lbm	113	122	113	122	<b>113</b>	<b>122</b>	113	122	113	122	<b>113</b>	<b>122</b>
481.wrf	157	71.2	157	71.0	<b>157</b>	<b>71.0</b>	157	71.2	157	71.0	<b>157</b>	<b>71.0</b>
482.sphinx3	<b>308</b>	<b>63.2</b>	297	65.7	310	62.8	288	67.6	284	68.5	<b>287</b>	<b>67.9</b>

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

## Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
'mount -t hugetlbfs nodev /mnt/hugepages' was used to enable large pages
echo 900> /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so
```

## Platform Notes

BIOS Settings:  
Power Management = Maximum Performance (Default = Active Power Controller)  
Logical Processor = Disabled (Default = Enabled)



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp2006 = 56.9

PowerEdge T110 II (Intel Xeon E3-1240, 3.30 GHz)

SPECfp\_base2006 = 54.8

CPU2006 license: 55

Test date: Mar-2011

Test sponsor: Dell Inc.

Hardware Availability: May-2011

Tested by: Dell Inc.

Software Availability: Apr-2011

## General Notes

OMP\_NUM\_THREADS set to number of cores  
The Dell PowerEdge T110 II and the Bull NovaScale T810B F2 models are electronically equivalent. The results have been measured on a Dell PowerEdge T110 II model  
Binaries were compiled on RHEL5.5

## 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.deallI: -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:

-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch  
-ansi-alias

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp2006 = 56.9

PowerEdge T110 II (Intel Xeon E3-1240, 3.30 GHz)

SPECfp\_base2006 = 54.8

CPU2006 license: 55

Test date: Mar-2011

Test sponsor: Dell Inc.

Hardware Availability: May-2011

Tested by: Dell Inc.

Software Availability: Apr-2011

## Base Optimization Flags (Continued)

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch  
-ansi-alias

## 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: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll2 -ansi-alias  
-parallel

C++ benchmarks:

444.namd: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -fno-alias  
-auto-ilp32

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp2006 = 56.9

PowerEdge T110 II (Intel Xeon E3-1240, 3.30 GHz)

SPECfp\_base2006 = 54.8

CPU2006 license: 55

Test date: Mar-2011

Test sponsor: Dell Inc.

Hardware Availability: May-2011

Tested by: Dell Inc.

Software Availability: Apr-2011

## Peak Optimization Flags (Continued)

447.deallI: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

### Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2  
-inline-level=0 -scalar-rep- -static

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2  
-inline-level=0 -opt-prefetch -parallel  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc  
-opt-malloc-options=3 -auto -unroll4  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

### Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20110524.00.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20110524.00.xml>



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp2006 = 56.9

PowerEdge T110 II (Intel Xeon E3-1240, 3.30 GHz)

SPECfp\_base2006 = 54.8

CPU2006 license: 55

Test date: Mar-2011

Test sponsor: Dell Inc.

Hardware Availability: May-2011

Tested by: Dell Inc.

Software Availability: Apr-2011

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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.  
Report generated on Wed Jul 23 18:02:39 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 7 June 2011.