



# SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

SPECfp®\_rate2006 = 259

NovaScale T860 F2 (Intel Xeon X5675, 3.06 GHz)

SPECfp\_rate\_base2006 = 252

CPU2006 license: 20

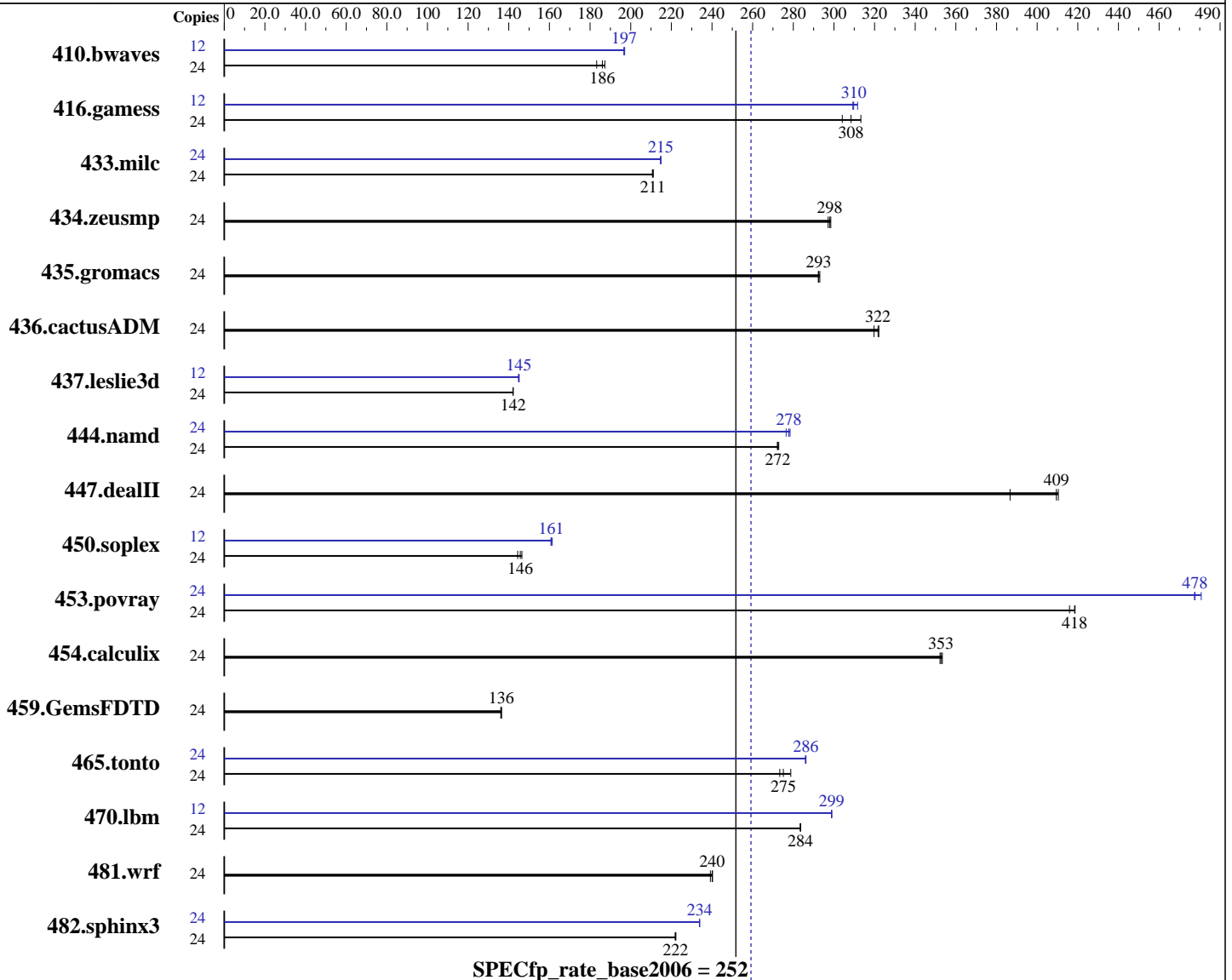
Test sponsor: Bull SAS

Tested by: Dell Inc.

Test date: Mar-2011

Hardware Availability: Feb-2011

Software Availability: Jan-2011



### Hardware

CPU Name: Intel Xeon X5675  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz  
 CPU MHz: 3067  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 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 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 12.0.1.116 Build 20101116  
 Auto Parallel: No  
 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

## Bull SAS

SPECfp\_rate2006 = 259

NovaScale T860 F2 (Intel Xeon X5675, 3.06 GHz)

SPECfp\_rate\_base2006 = 252

CPU2006 license: 20

Test date: Mar-2011

Test sponsor: Bull SAS

Hardware Availability: Feb-2011

Tested by: Dell Inc.

Software Availability: Jan-2011

L3 Cache: 12 MB I+D on chip per chip  
Other Cache: None  
Memory: 48 GB (12 x 4 GB 2Rx4 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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	24	1780	183	1741	187	<b>1753</b>	<b>186</b>	12	828	197	829	197	<b>829</b>	<b>197</b>
416.gamess	24	1500	313	<b>1524</b>	<b>308</b>	1545	304	12	754	312	<b>759</b>	<b>310</b>	760	309
433.milc	24	1044	211	1046	211	<b>1045</b>	<b>211</b>	24	1026	215	<b>1026</b>	<b>215</b>	1025	215
434.zeusmp	24	<b>733</b>	<b>298</b>	732	298	735	297	24	<b>733</b>	<b>298</b>	732	298	735	297
435.gromacs	24	<b>586</b>	<b>293</b>	586	292	585	293	24	<b>586</b>	<b>293</b>	586	292	585	293
436.cactusADM	24	890	322	897	320	<b>891</b>	<b>322</b>	24	890	322	897	320	<b>891</b>	<b>322</b>
437.leslie3d	24	<b>1587</b>	<b>142</b>	1587	142	1588	142	12	777	145	779	145	<b>778</b>	<b>145</b>
444.namd	24	707	272	705	273	<b>707</b>	<b>272</b>	24	691	278	696	276	<b>693</b>	<b>278</b>
447.dealII	24	<b>671</b>	<b>409</b>	669	410	710	387	24	<b>671</b>	<b>409</b>	669	410	710	387
450.soplex	24	1367	146	1386	144	<b>1374</b>	<b>146</b>	12	620	161	622	161	<b>622</b>	<b>161</b>
453.povray	24	307	416	<b>305</b>	<b>418</b>	305	419	24	266	481	<b>267</b>	<b>478</b>	267	477
454.calculix	24	562	352	560	353	<b>561</b>	<b>353</b>	24	562	352	560	353	<b>561</b>	<b>353</b>
459.GemsFDTD	24	1866	136	<b>1868</b>	<b>136</b>	1871	136	24	1866	136	<b>1868</b>	<b>136</b>	1871	136
465.tonto	24	<b>858</b>	<b>275</b>	864	273	847	279	24	826	286	825	286	<b>825</b>	<b>286</b>
470.lbm	24	1162	284	<b>1163</b>	<b>284</b>	1164	283	12	552	299	552	299	<b>552</b>	<b>299</b>
481.wrf	24	1116	240	1121	239	<b>1117</b>	<b>240</b>	24	1116	240	1121	239	<b>1117</b>	<b>240</b>
482.sphinx3	24	2108	222	<b>2106</b>	<b>222</b>	2105	222	24	<b>2000</b>	<b>234</b>	2000	234	2000	234

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
'mount -t hugetlbfs nodev /mnt/hugepages' was used to enable large pages
echo 10800 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so
```



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

SPECfp\_rate2006 = 259

NovaScale T860 F2 (Intel Xeon X5675, 3.06 GHz)

SPECfp\_rate\_base2006 = 252

CPU2006 license: 20

Test sponsor: Bull SAS

Tested by: Dell Inc.

Test date: Mar-2011

Hardware Availability: Feb-2011

Software Availability: Jan-2011

## Platform Notes

BIOS Settings:

Power Management = Maximum Performance (Default = Active Power Controller)

Data Reuse = Disabled (Default = Enabled)

## General Notes

The Dell PowerEdge T710 and the Bull NovaScale T860 F2 models are electronically equivalent. The results have been measured on a Dell PowerEdge T710 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.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



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

SPECfp\_rate2006 = 259

NovaScale T860 F2 (Intel Xeon X5675, 3.06 GHz)

SPECfp\_rate\_base2006 = 252

CPU2006 license: 20

Test sponsor: Bull SAS

Tested by: Dell Inc.

Test date: Mar-2011

Hardware Availability: Feb-2011

Software Availability: Jan-2011

## Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias

## 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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

SPECfp\_rate2006 = 259

NovaScale T860 F2 (Intel Xeon X5675, 3.06 GHz)

SPECfp\_rate\_base2006 = 252

CPU2006 license: 20

Test date: Mar-2011

Test sponsor: Bull SAS

Hardware Availability: Feb-2011

Tested by: Dell Inc.

Software Availability: Jan-2011

## Peak Portability Flags (Continued)

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) -prof-use(pass 2) -static -auto-ilp32

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3  
-ansi-alias -opt-prefetch -static -auto-ilp32

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

C++ benchmarks:

444.namd: -xSSE4.2(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

447.dealIII: basepeak = yes

450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

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

416.gamess: -xSSE4.2(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: -xSSE4.2 -ipo -O3 -no-prec-div  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

459.GemsFDTD: basepeak = yes

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

SPECfp\_rate2006 = 259

NovaScale T860 F2 (Intel Xeon X5675, 3.06 GHz)

SPECfp\_rate\_base2006 = 252

CPU2006 license: 20

Test sponsor: Bull SAS

Tested by: Dell Inc.

Test date: Mar-2011

Hardware Availability: Feb-2011

Software Availability: Jan-2011

## Peak Optimization Flags (Continued)

```
465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto
-inline-calloc -opt-malloc-options=3
-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: basepeak = yes

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.20110426.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.20110426.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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.

Report generated on Wed Jul 23 18:41:32 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 26 April 2011.

Standard Performance Evaluation Corporation

[info@spec.org](mailto:info@spec.org)

<http://www.spec.org/>