



# SPEC® CFP2006 Result

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## Bull SAS

NovaScale R460  
(Intel Xeon processor E5320,1.86GHz)

SPECfp®\_rate2006 = 41.0

SPECfp\_rate\_base2006 = 40.4

CPU2006 license: 20

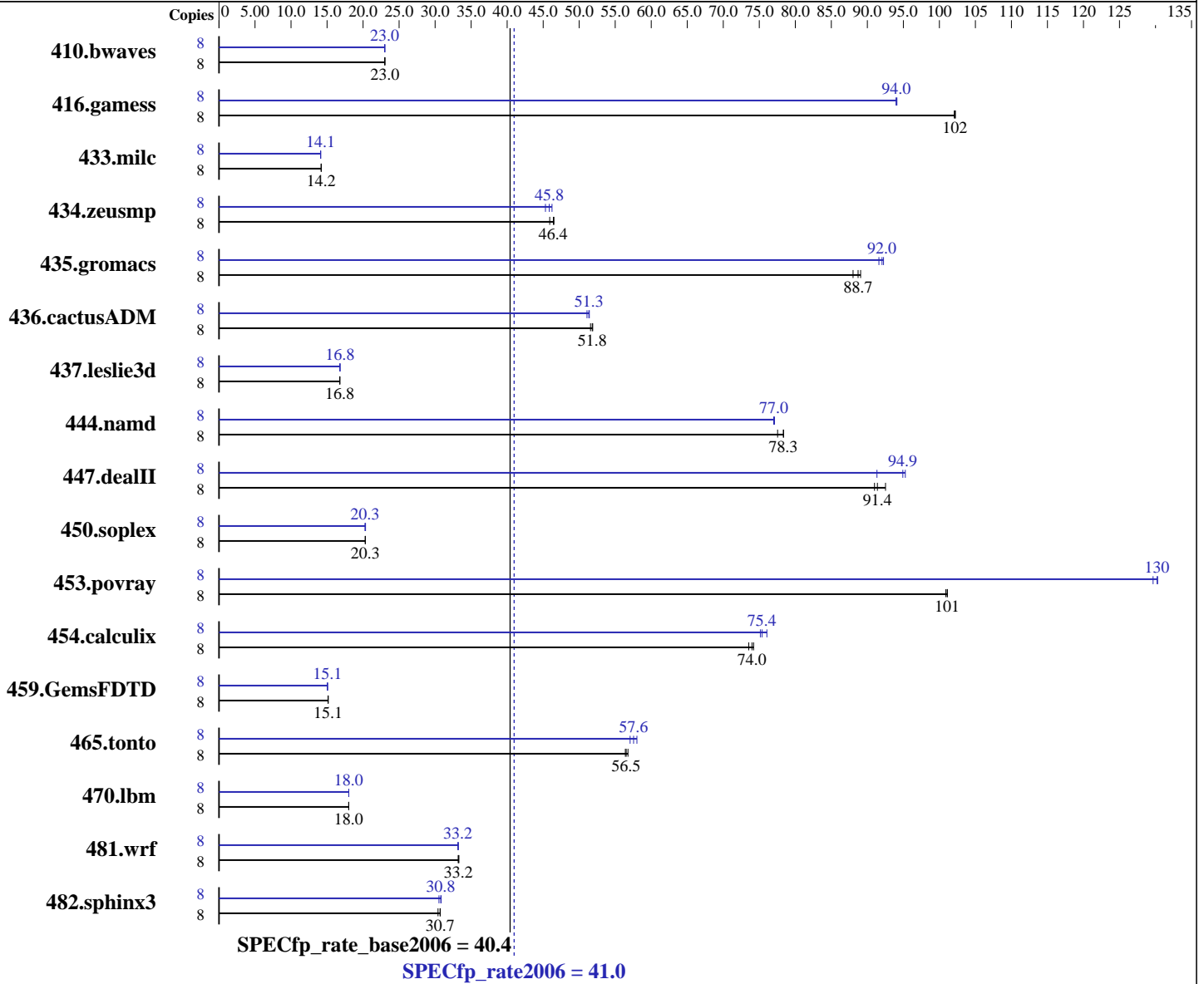
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Apr-2007

Hardware Availability: Mar-2007

Software Availability: Dec-2006



### Hardware

CPU Name: Intel Xeon E5320  
 CPU Characteristics: 1.86 GHz, 8 MB L2, 1066 MHz system bus  
 CPU MHz: 1860  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
 CPU(s) orderable: 1 to 2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores

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### Software

Operating System: SuSE Linux Enterprise Server 10 (EM64T) kernel 2.6.16.21-0.8-smp  
 Compiler: Intel C++ Compiler for Intel EM64T-based applications, Version 9.1  
 Package ID l\_cc\_c\_9.1.045 Build no 20061101  
 Intel Fortran Compiler for Intel EM64T-based applications, Version 9.1  
 Package ID l\_fc\_c\_9.1.040 Build no 20061101  
 Auto Parallel: No

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L3 Cache: None  
Other Cache: None  
Memory: 12 GB (12x1 GB) FB-DIMM PC2-5300F ECC CL5  
Disk Subsystem: 1x73 GB SAS, 10000 RPM  
Other Hardware: None

File System: ext2  
System State: Multi-user run level 3  
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	8	4724	23.0	<u>4723</u>	<u>23.0</u>	4722	23.0	8	4726	23.0	<u>4724</u>	<u>23.0</u>	4724	23.0
416.gamess	8	1535	102	1532	102	<u>1533</u>	<u>102</u>	8	1664	94.1	1667	94.0	<u>1666</u>	<u>94.0</u>
433.milc	8	5177	14.2	<u>5175</u>	<u>14.2</u>	5174	14.2	8	5206	14.1	<u>5204</u>	<u>14.1</u>	5204	14.1
434.zeusmp	8	<u>1569</u>	<u>46.4</u>	1566	46.5	1586	45.9	8	1606	45.3	<u>1588</u>	<u>45.8</u>	1575	46.2
435.gromacs	8	<u>644</u>	<u>88.7</u>	649	88.0	641	89.1	8	619	92.2	<u>621</u>	<u>92.0</u>	624	91.6
436.cactusADM	8	1843	51.9	<u>1845</u>	<u>51.8</u>	1854	51.6	8	1872	51.1	1860	51.4	<u>1862</u>	<u>51.3</u>
437.leslie3d	8	<u>4484</u>	<u>16.8</u>	4485	16.8	4483	16.8	8	4482	16.8	<u>4477</u>	<u>16.8</u>	4476	16.8
444.namd	8	819	78.4	827	77.5	<u>819</u>	<u>78.3</u>	8	832	77.1	<u>833</u>	<u>77.0</u>	833	77.0
447.dealII	8	989	92.5	1006	91.0	<u>1001</u>	<u>91.4</u>	8	961	95.3	1002	91.3	<u>964</u>	<u>94.9</u>
450.soplex	8	3287	20.3	3283	20.3	<u>3285</u>	<u>20.3</u>	8	<u>3289</u>	<u>20.3</u>	3289	20.3	3280	20.3
453.povray	8	421	101	<u>421</u>	<u>101</u>	422	101	8	<u>327</u>	<u>130</u>	328	130	327	130
454.calculix	8	897	73.5	889	74.2	<u>892</u>	<u>74.0</u>	8	<u>876</u>	<u>75.4</u>	878	75.1	868	76.1
459.GemsFDTD	8	5610	15.1	5597	15.2	<u>5604</u>	<u>15.1</u>	8	5646	15.0	<u>5633</u>	<u>15.1</u>	5632	15.1
465.tonto	8	1396	56.4	<u>1393</u>	<u>56.5</u>	1387	56.8	8	1357	58.0	1379	57.1	<u>1368</u>	<u>57.6</u>
470.lbm	8	6106	18.0	<u>6101</u>	<u>18.0</u>	6101	18.0	8	6100	18.0	6101	18.0	<u>6101</u>	<u>18.0</u>
481.wrf	8	<u>2689</u>	<u>33.2</u>	2690	33.2	2683	33.3	8	2689	33.2	2694	33.2	<u>2694</u>	<u>33.2</u>
482.sphinx3	8	5128	30.4	<u>5081</u>	<u>30.7</u>	5075	30.7	8	5106	30.5	<u>5065</u>	<u>30.8</u>	5056	30.8

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

## Operating System Notes

Environment stack size set to 'unlimited'

## General Notes

The NovaScale R440 and the NovaScale R460 models are electronically equivalent.  
The results have been measured on a NovaScale R460 model.



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## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

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:  
-fast

C++ benchmarks:  
-fast

Fortran benchmarks:  
-fast

Benchmarks using both Fortran and C:  
-fast



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## Peak Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

Fortran benchmarks:  
ifort

Benchmarks using both Fortran and C:  
icc ifort

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:  
-prof\_gen(pass 1) -prof\_use(pass 2) -fast -auto\_ilp32

C++ benchmarks:  
-prof\_gen(pass 1) -prof\_use(pass 2) -fast -auto\_ilp32

Fortran benchmarks:  
-prof\_gen(pass 1) -prof\_use(pass 2) -fast

Benchmarks using both Fortran and C:  
-prof\_gen(pass 1) -prof\_use(pass 2) -fast -auto\_ilp32

The flags file that was used to format this result can be browsed at  
[http://www.spec.org/cpu2006/flags/EM64T\\_Intel91\\_flags.html](http://www.spec.org/cpu2006/flags/EM64T_Intel91_flags.html)

You can also download the XML flags source by saving the following link:  
[http://www.spec.org/cpu2006/flags/EM64T\\_Intel91\\_flags.xml](http://www.spec.org/cpu2006/flags/EM64T_Intel91_flags.xml)



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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 v1.0.  
Report generated on Tue Jul 22 11:49:25 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 29 May 2007.