



# SPEC® CFP2006 Result

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## Bull SAS

NovaScale R460  
(Intel Xeon processor 5120,1.86GHz)

SPECfp®\_rate2006 = 31.4

SPECfp\_rate\_base2006 = 31.0

CPU2006 license: 20

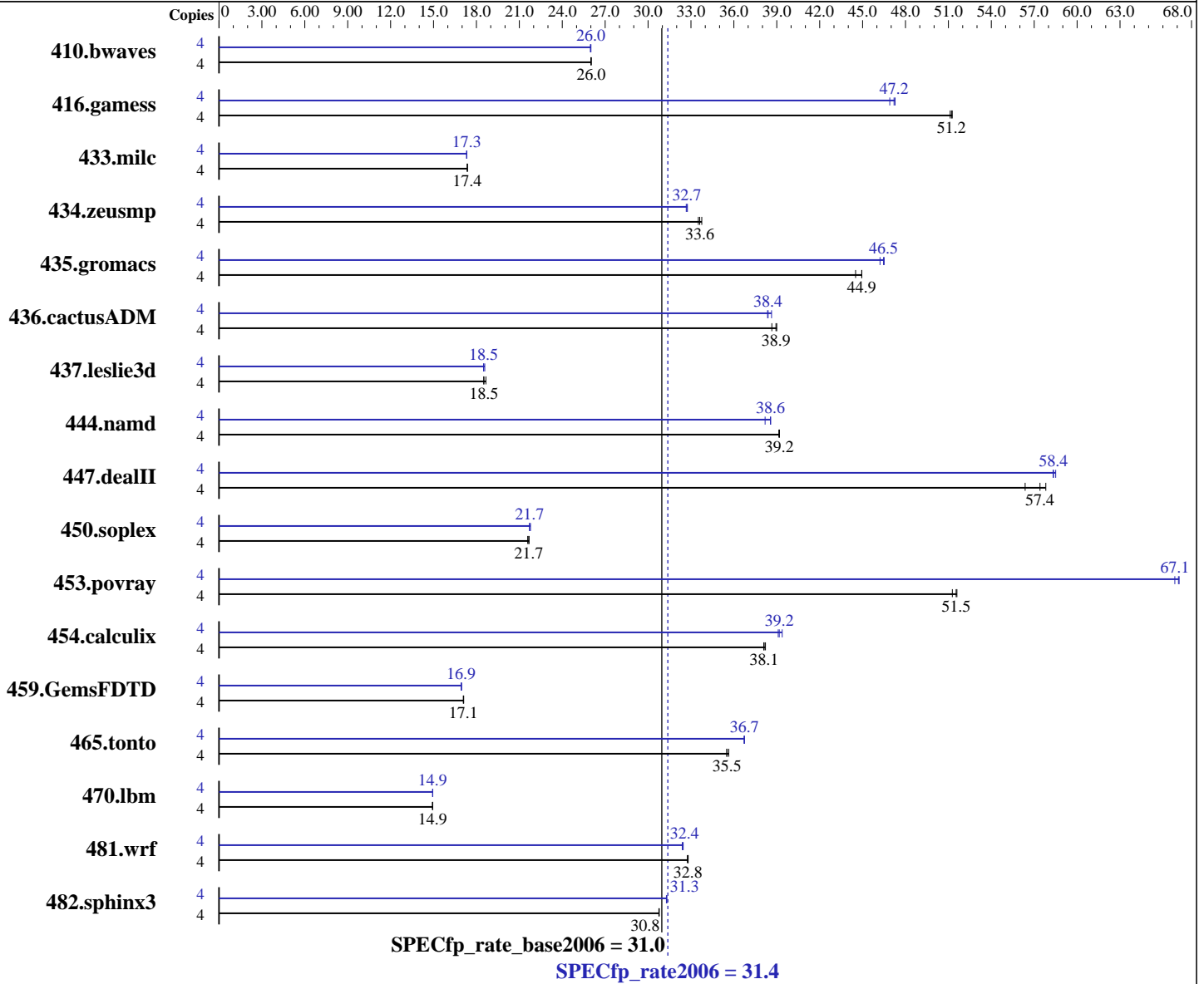
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: May-2007

Hardware Availability: Mar-2007

Software Availability: Dec-2006



### Hardware

CPU Name: Intel Xeon 5120  
 CPU Characteristics: 1.86 GHz, 4 MB L2, 1066 MHz system bus  
 CPU MHz: 1866  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1 to 2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 4 MB I+D on chip per chip

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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: 24 GB (12x2 GB) FB-DIMM PC2-5300F ECC CL5  
Disk Subsystem: 1x73 GB SAS, 15000 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	4	<u>2089</u>	<u>26.0</u>	2089	26.0	2091	26.0	4	2090	26.0	2094	26.0	<u>2091</u>	<u>26.0</u>
416.gamess	4	<u>1529</u>	<u>51.2</u>	1532	51.1	1528	51.3	4	<u>1659</u>	<u>47.2</u>	1657	47.3	1670	46.9
433.milc	4	2114	17.4	2115	17.4	<u>2115</u>	<u>17.4</u>	4	<u>2120</u>	<u>17.3</u>	2120	17.3	2121	17.3
434.zeusmp	4	1086	33.5	1078	33.8	<u>1083</u>	<u>33.6</u>	4	1111	32.8	<u>1113</u>	<u>32.7</u>	1114	32.7
435.gromacs	4	<u>635</u>	<u>44.9</u>	635	44.9	642	44.5	4	618	46.2	614	46.5	<u>615</u>	<u>46.5</u>
436.cactusADM	4	1226	39.0	<u>1227</u>	<u>38.9</u>	1237	38.7	4	1246	38.4	<u>1245</u>	<u>38.4</u>	1237	38.6
437.leslie3d	4	2015	18.7	<u>2030</u>	<u>18.5</u>	2031	18.5	4	2032	18.5	2023	18.6	<u>2032</u>	<u>18.5</u>
444.namd	4	<u>819</u>	<u>39.2</u>	819	39.1	819	39.2	4	840	38.2	<u>832</u>	<u>38.6</u>	832	38.6
447.dealII	4	812	56.4	<u>797</u>	<u>57.4</u>	792	57.8	4	785	58.3	782	58.5	<u>784</u>	<u>58.4</u>
450.soplex	4	1546	21.6	1539	21.7	<u>1540</u>	<u>21.7</u>	4	<u>1536</u>	<u>21.7</u>	1532	21.8	1537	21.7
453.povray	4	412	51.6	415	51.3	<u>413</u>	<u>51.5</u>	4	317	67.1	<u>317</u>	<u>67.1</u>	318	66.8
454.calculix	4	864	38.2	866	38.1	<u>866</u>	<u>38.1</u>	4	838	39.4	<u>842</u>	<u>39.2</u>	844	39.1
459.GemsFDTD	4	2480	17.1	<u>2483</u>	<u>17.1</u>	2484	17.1	4	2507	16.9	2501	17.0	<u>2506</u>	<u>16.9</u>
465.tonto	4	1104	35.6	1108	35.5	<u>1108</u>	<u>35.5</u>	4	<u>1071</u>	<u>36.7</u>	1071	36.7	1072	36.7
470.lbm	4	<u>3680</u>	<u>14.9</u>	3681	14.9	3680	14.9	4	3679	14.9	3678	14.9	<u>3678</u>	<u>14.9</u>
481.wrf	4	1362	32.8	1364	32.7	<u>1362</u>	<u>32.8</u>	4	1379	32.4	1377	32.5	<u>1378</u>	<u>32.4</u>
482.sphinx3	4	2535	30.8	<u>2533</u>	<u>30.8</u>	2533	30.8	4	2489	31.3	<u>2491</u>	<u>31.3</u>	2492	31.3

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'  
'/usr/bin/taskset' used to bind processes to CPUs

## 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).

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