



# SPEC® CFP2006 Result

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## Bull SAS

SPECfp®\_rate2006 = 40.9

NovaScale T840 (1.86 GHz, Intel Xeon E5320)

SPECfp\_rate\_base2006 = 40.1

CPU2006 license: 20

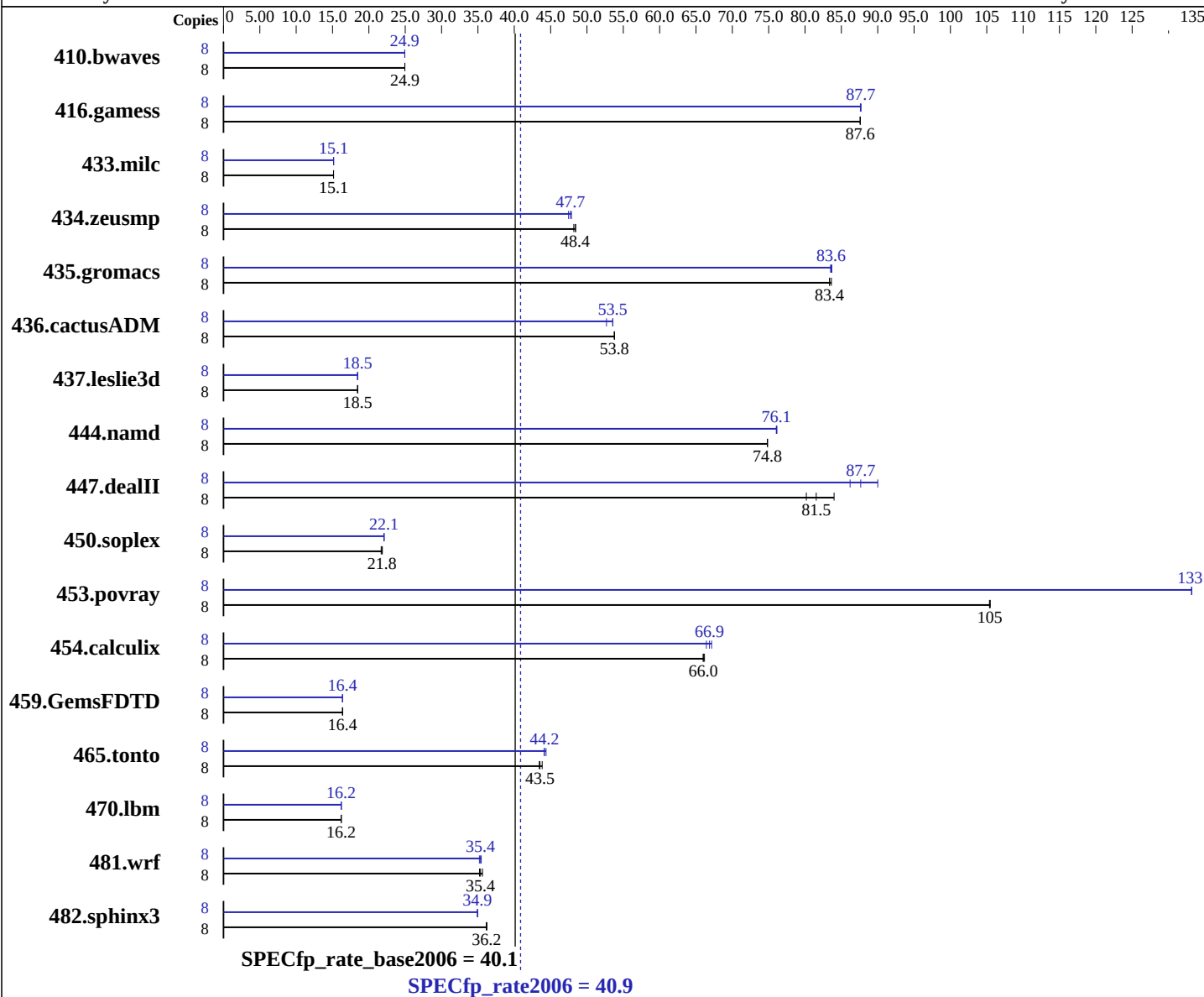
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Mar-2007

Hardware Availability: Jan-2007

Software Availability: Nov-2006



### Hardware

CPU Name: Intel Xeon E5320  
CPU Characteristics: 1.86 GHz, 8MB L2, 1066MHz bus  
CPU MHz: 1860  
FPU: Integrated  
CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
CPU(s) orderable: 1,2 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: Windows Server 2003 Enterprise X64 Edition  
Compiler: Intel C++ Compiler 9.1.033 for 32-bit apps.  
Build 20061103Z Package ID: W\_CC\_C\_9.1.033  
Intel Fortran Compiler 9.1.033 for 32-bit app.  
Build 20061103Z Package ID: W\_FC\_C\_9.1.033  
Microsoft Visual Studio .NET 2003 (libraries)  
Auto Parallel: No  
File System: NTFS  
System State: Default

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L3 Cache: None  
 Other Cache: None  
 Memory: 8 GB (667 MHz ECC CL5 DDR2 FB-DIMM)  
 Disk Subsystem: 3x73GB SCSI 15000 rpm  
 Other Hardware: None

Base Pointers: 32-bit  
 Peak Pointers: 32-bit  
 Other Software: MicroQuill SmartHeap Library 8.0 (shlW32M.lib)

## Results Table

| Benchmark     | Base   |             |             |             |             |             |             |        | Peak        |             |             |             |             |             |         |       |
|---------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|---------|-------|
|               | Copies | Seconds     | Ratio       | Seconds     | Ratio       | Seconds     | Ratio       | Copies | Seconds     | Ratio       | Seconds     | Ratio       | Seconds     | Ratio       | Seconds | Ratio |
| 410.bwaves    | 8      | <b>4358</b> | <b>24.9</b> | 4357        | 25.0        | 4359        | 24.9        | 8      | 4360        | 24.9        | <b>4359</b> | <b>24.9</b> | 4359        | 24.9        |         |       |
| 416.gamess    | 8      | 1789        | 87.6        | 1788        | 87.6        | <b>1788</b> | <b>87.6</b> | 8      | 1788        | 87.6        | <b>1787</b> | <b>87.7</b> | 1786        | 87.7        |         |       |
| 433.milc      | 8      | <b>4852</b> | <b>15.1</b> | 4849        | 15.1        | 4852        | 15.1        | 8      | 4850        | 15.1        | <b>4848</b> | <b>15.1</b> | 4847        | 15.2        |         |       |
| 434.zeusmp    | 8      | <b>1504</b> | <b>48.4</b> | 1503        | 48.4        | 1511        | 48.2        | 8      | 1521        | 47.9        | <b>1525</b> | <b>47.7</b> | 1534        | 47.5        |         |       |
| 435.gromacs   | 8      | 685         | 83.4        | 683         | 83.6        | <b>685</b>  | <b>83.4</b> | 8      | 684         | 83.5        | 682         | 83.7        | <b>683</b>  | <b>83.6</b> |         |       |
| 436.cactusADM | 8      | 1777        | 53.8        | <b>1777</b> | <b>53.8</b> | 1779        | 53.7        | 8      | 1785        | 53.6        | <b>1785</b> | <b>53.5</b> | 1815        | 52.7        |         |       |
| 437.leslie3d  | 8      | 4075        | 18.5        | <b>4075</b> | <b>18.5</b> | 4076        | 18.4        | 8      | 4079        | 18.4        | 4074        | 18.5        | <b>4075</b> | <b>18.5</b> |         |       |
| 444.namd      | 8      | 858         | 74.8        | 857         | 74.8        | <b>857</b>  | <b>74.8</b> | 8      | <b>844</b>  | <b>76.1</b> | 843         | 76.1        | 844         | 76.1        |         |       |
| 447.dealII    | 8      | 1141        | 80.2        | 1090        | 84.0        | <b>1122</b> | <b>81.5</b> | 8      | <b>1044</b> | <b>87.7</b> | 1017        | 90.0        | 1062        | 86.2        |         |       |
| 450.soplex    | 8      | 3053        | 21.9        | <b>3061</b> | <b>21.8</b> | 3076        | 21.7        | 8      | <b>3022</b> | <b>22.1</b> | 3017        | 22.1        | 3025        | 22.1        |         |       |
| 453.povray    | 8      | 403         | 105         | <b>404</b>  | <b>105</b>  | 404         | 105         | 8      | 319         | 133         | <b>320</b>  | <b>133</b>  | 320         | 133         |         |       |
| 454.calculix  | 8      | 1000        | 66.0        | <b>1000</b> | <b>66.0</b> | 998         | 66.2        | 8      | <b>987</b>  | <b>66.9</b> | 993         | 66.4        | 983         | 67.2        |         |       |
| 459.GemsFDTD  | 8      | <b>5175</b> | <b>16.4</b> | 5174        | 16.4        | 5192        | 16.3        | 8      | 5178        | 16.4        | <b>5184</b> | <b>16.4</b> | 5187        | 16.4        |         |       |
| 465.tonto     | 8      | 1796        | 43.8        | <b>1808</b> | <b>43.5</b> | 1812        | 43.4        | 8      | <b>1783</b> | <b>44.2</b> | 1785        | 44.1        | 1774        | 44.4        |         |       |
| 470.lbm       | 8      | <b>6788</b> | <b>16.2</b> | 6787        | 16.2        | 6789        | 16.2        | 8      | 6786        | 16.2        | <b>6785</b> | <b>16.2</b> | 6785        | 16.2        |         |       |
| 481.wrf       | 8      | 2537        | 35.2        | 2508        | 35.6        | <b>2527</b> | <b>35.4</b> | 8      | 2520        | 35.5        | <b>2528</b> | <b>35.4</b> | 2538        | 35.2        |         |       |
| 482.sphinx3   | 8      | 4304        | 36.2        | 4313        | 36.2        | <b>4307</b> | <b>36.2</b> | 8      | 4459        | 35.0        | <b>4463</b> | <b>34.9</b> | 4464        | 34.9        |         |       |

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

## Base Compiler Invocation

C benchmarks:  
 icl -Qvc7.1 -Qc99

C++ benchmarks:  
 icl -Qvc7.1

Fortran benchmarks:  
 ifort

Benchmarks using both Fortran and C:  
 icl -Qvc7.1 -Qc99 ifort



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**Software Availability:** Nov-2006

## Base Portability Flags

436.cactusADM: -Qlowercase /assume:underscore  
444.namd: -TP  
447.dealII: -DDEAL\_II\_MEMBER\_VAR\_SPECIALIZATION\_BUG  
-DBOOST\_NO\_INTRINSIC\_WCHAR\_T  
453.povray: -DSPEC\_CPU\_WINDOWS\_ICL  
454.calculix: -DSPEC\_CPU\_NOZMODIFIER -Qlowercase  
481.wrf: -DSPEC\_CPU\_WINDOWS\_ICL

## Base Optimization Flags

C benchmarks:  
-fast /F950000000 shlw32m.lib -link /FORCE:MULTIPLE

C++ benchmarks:  
-fast -Qcxx\_features /F950000000 shlw32m.lib  
-link /FORCE:MULTIPLE

Fortran benchmarks:  
-fast /F950000000 -link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:  
-fast /F950000000 -link /FORCE:MULTIPLE

## Peak Compiler Invocation

C benchmarks:  
icl -Qvc7.1 -Qc99

C++ benchmarks:  
icl -Qvc7.1

Fortran benchmarks:  
ifort

Benchmarks using both Fortran and C:  
icl -Qvc7.1 -Qc99 ifort

## Peak Portability Flags

436.cactusADM: -Qlowercase /assume:underscore  
444.namd: -TP  
447.dealII: -DDEAL\_II\_MEMBER\_VAR\_SPECIALIZATION\_BUG  
-DBOOST\_NO\_INTRINSIC\_WCHAR\_T

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## Peak Portability Flags (Continued)

453.povray: -DSPEC\_CPU\_WINDOWS\_ICL  
454.calculix: -DSPEC\_CPU\_NOZMODIFIER -Qlowercase  
481.wrf: -DSPEC\_CPU\_WINDOWS\_ICL

## Peak Optimization Flags

C benchmarks:

-Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast /F950000000 shlw32m.lib  
-link /FORCE:MULTIPLE

C++ benchmarks:

-Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qcxx\_features  
/F950000000 shlw32m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast /F950000000  
-link /FORCE:MULTIPLE

416.gamess: -fast /F950000000 -link /FORCE:MULTIPLE

434.zeusmp: Same as 410.bwaves

437.lelie3d: Same as 410.bwaves

459.GemsFDTD: Same as 410.bwaves

465.tonto: Same as 410.bwaves

Benchmarks using both Fortran and C:

435.gromacs: -fast /F950000000 -link /FORCE:MULTIPLE

436.cactusADM: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast /F950000000  
-link /FORCE:MULTIPLE

454.calculix: Same as 436.cactusADM

481.wrf: Same as 435.gromacs

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/flags.20090714.00.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/flags.20090714.00.xml>



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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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