# SPEC® CFP2006 Result



## Bull SAS

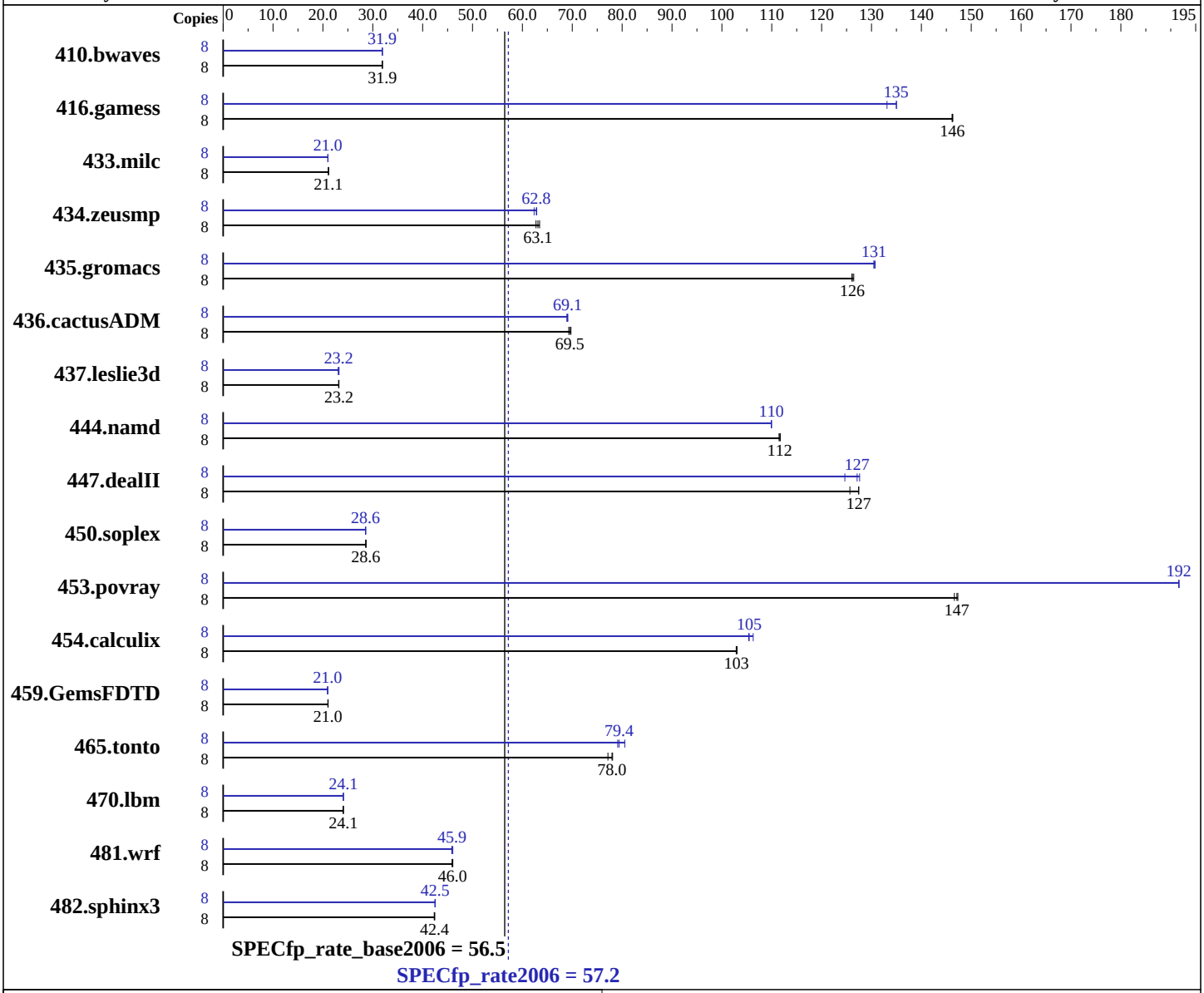
NovaScale R440
(Intel Xeon processor X5355,2.66GHz)

SPECfp®_rate2006 = 57.2

SPECfp_rate_base2006 = 56.5

**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 X5355 |
| CPU Characteristics: | 2.66 GHz, 8 MB L2, 1333 MHz system bus |
| CPU MHz: | 2666 |
| 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: 24 GB (12x2 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 | 3405 | 31.9 | **3405** | **31.9** | 3408 | 31.9 | 8 | 3407 | 31.9 | 3406 | 31.9 | **3406** | **31.9** |
| 416.gamess | 8 | 1071 | 146 | 1072 | 146 | **1071** | **146** | 8 | 1160 | 135 | 1177 | 133 | **1161** | **135** |
| 433.milc | 8 | 3479 | 21.1 | **3477** | **21.1** | 3476 | 21.1 | 8 | 3492 | 21.0 | 3499 | 21.0 | **3497** | **21.0** |
| 434.zeusmp | 8 | 1161 | 62.7 | **1153** | **63.1** | 1147 | 63.5 | 8 | 1168 | 62.3 | **1159** | **62.8** | 1158 | 62.9 |
| 435.gromacs | 8 | 452 | 126 | 453 | 126 | **453** | **126** | 8 | **438** | **131** | 437 | 131 | 438 | 130 |
| 436.cactusADM | 8 | 1380 | 69.3 | **1375** | **69.5** | 1371 | 69.7 | 8 | 1383 | 69.1 | **1384** | **69.1** | 1387 | 68.9 |
| 437.leslie3d | 8 | **3241** | **23.2** | 3250 | 23.1 | 3240 | 23.2 | 8 | 3259 | 23.1 | **3247** | **23.2** | 3236 | 23.2 |
| 444.namd | 8 | 574 | 112 | 576 | 111 | **575** | **112** | 8 | 584 | 110 | **584** | **110** | 584 | 110 |
| 447.dealII | 8 | 718 | 127 | **718** | **127** | 728 | 126 | 8 | **720** | **127** | 717 | 128 | 734 | 125 |
| 450.soplex | 8 | **2332** | **28.6** | 2333 | 28.6 | 2329 | 28.6 | 8 | 2334 | 28.6 | 2337 | 28.6 | **2336** | **28.6** |
| 453.povray | 8 | 290 | 147 | 289 | 147 | **289** | **147** | 8 | **222** | **192** | 222 | 192 | 222 | 192 |
| 454.calculix | 8 | 641 | 103 | 642 | 103 | **641** | **103** | 8 | 626 | 105 | 621 | 106 | **626** | **105** |
| 459.GemsFDTD | 8 | 4041 | 21.0 | **4040** | **21.0** | 4031 | 21.1 | 8 | **4048** | **21.0** | 4056 | 20.9 | 4046 | 21.0 |
| 465.tonto | 8 | 1008 | 78.1 | **1010** | **78.0** | 1020 | 77.2 | 8 | 995 | 79.1 | 977 | 80.5 | **992** | **79.4** |
| 470.lbm | 8 | 4575 | 24.0 | 4559 | 24.1 | **4559** | **24.1** | 8 | **4559** | **24.1** | 4566 | 24.1 | 4559 | 24.1 |
| 481.wrf | 8 | **1943** | **46.0** | 1940 | 46.1 | 1947 | 45.9 | 8 | 1949 | 45.8 | 1940 | 46.1 | **1948** | **45.9** |
| 482.sphinx3 | 8 | 3684 | 42.3 | 3675 | 42.4 | **3679** | **42.4** | 8 | **3668** | **42.5** | 3671 | 42.5 | 3668 | 42.5 |

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 R440 model.
```

## 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

## 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

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/EM64T_Intel91_flags.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.
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