# SPEC® CFP2006 Result



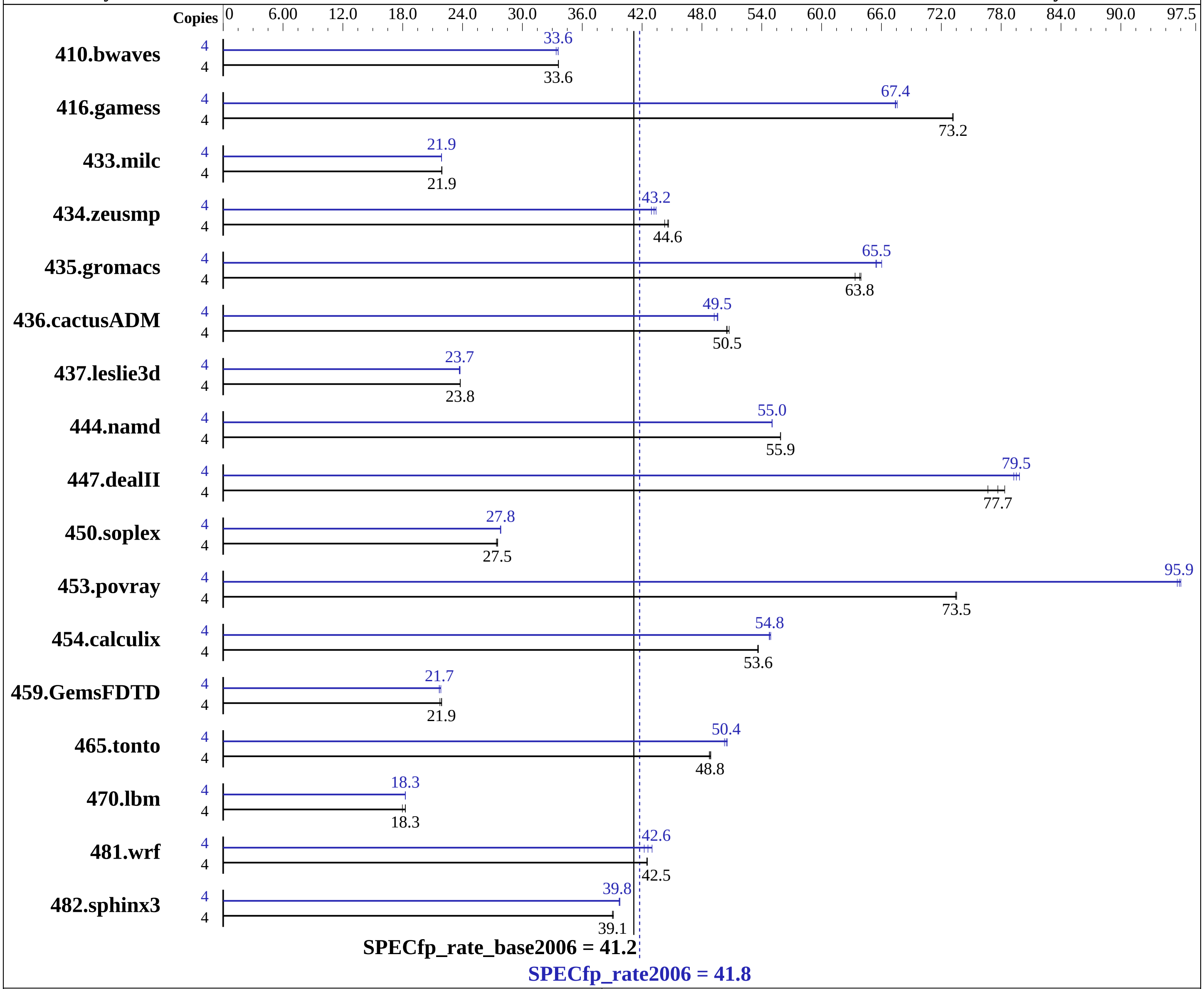
## Bull SAS

NovaScale R440
(Intel Xeon processor 5150,2.66GHz)

SPECfp®_rate2006 = 41.8

SPECfp_rate_base2006 = 41.2

| | | | |
|---|---|---|---|
| **CPU2006 license:** | 20 | **Test date:** | May-2007 |
| **Test sponsor:** | Bull SAS | **Hardware Availability:** | Mar-2007 |
| **Tested by:** | Bull SAS | **Software Availability:** | Dec-2006 |




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon 5150 |
| CPU Characteristics: | 2.66 GHz, 4 MB L2, 1333 MHz system bus |
| CPU MHz: | 2666 |
| 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 | **1618** | **33.6** | 1618 | 33.6 | 1617 | 33.6 | 4 | 1618 | 33.6 | **1619** | **33.6** | 1628 | 33.4 |
| 416.gamess | 4 | 1070 | 73.2 | **1070** | **73.2** | 1071 | 73.1 | 4 | 1162 | 67.4 | 1159 | 67.6 | **1162** | **67.4** |
| 433.milc | 4 | 1677 | 21.9 | **1674** | **21.9** | 1674 | 21.9 | 4 | **1677** | **21.9** | 1676 | 21.9 | 1677 | 21.9 |
| 434.zeusmp | 4 | 822 | 44.3 | **817** | **44.6** | 815 | 44.7 | 4 | 848 | 42.9 | **843** | **43.2** | 839 | 43.4 |
| 435.gromacs | 4 | 447 | 63.9 | **448** | **63.8** | 451 | 63.3 | 4 | 436 | 65.4 | 433 | 66.0 | **436** | **65.5** |
| 436.cactusADM | 4 | 947 | 50.5 | **946** | **50.5** | 942 | 50.7 | 4 | **965** | **49.5** | 964 | 49.6 | 971 | 49.2 |
| 437.leslie3d | 4 | **1582** | **23.8** | 1581 | 23.8 | 1582 | 23.8 | 4 | **1586** | **23.7** | 1583 | 23.8 | 1588 | 23.7 |
| 444.namd | 4 | 574 | 55.9 | 574 | 55.9 | **574** | **55.9** | 4 | 583 | 55.1 | 583 | 55.0 | **583** | **55.0** |
| 447.dealII | 4 | 597 | 76.7 | **589** | **77.7** | 584 | 78.4 | 4 | **575** | **79.5** | 573 | 79.8 | 577 | 79.3 |
| 450.soplex | 4 | **1214** | **27.5** | 1218 | 27.4 | 1212 | 27.5 | 4 | 1198 | 27.8 | **1199** | **27.8** | 1200 | 27.8 |
| 453.povray | 4 | 289 | 73.5 | 290 | 73.4 | **289** | **73.5** | 4 | **222** | **95.9** | 222 | 96.0 | 222 | 95.7 |
| 454.calculix | 4 | 616 | 53.6 | **615** | **53.6** | 615 | 53.7 | 4 | 601 | 54.9 | 603 | 54.7 | **602** | **54.8** |
| 459.GemsFDTD | 4 | 1937 | 21.9 | **1939** | **21.9** | 1953 | 21.7 | 4 | **1958** | **21.7** | 1944 | 21.8 | 1959 | 21.7 |
| 465.tonto | 4 | **806** | **48.8** | 805 | 48.9 | 808 | 48.7 | 4 | 779 | 50.5 | **780** | **50.4** | 783 | 50.3 |
| 470.lbm | 4 | **3009** | **18.3** | 3059 | 18.0 | 3008 | 18.3 | 4 | **3010** | **18.3** | 3010 | 18.3 | 3010 | 18.3 |
| 481.wrf | 4 | 1052 | 42.5 | **1052** | **42.5** | 1050 | 42.5 | 4 | 1058 | 42.2 | 1039 | 43.0 | **1049** | **42.6** |
| 482.sphinx3 | 4 | 1998 | 39.0 | **1996** | **39.1** | 1992 | 39.1 | 4 | 1964 | 39.7 | **1961** | **39.8** | 1960 | 39.8 |

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'
'/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

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

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