# SPEC® CFP2006 Result

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## Bull SAS

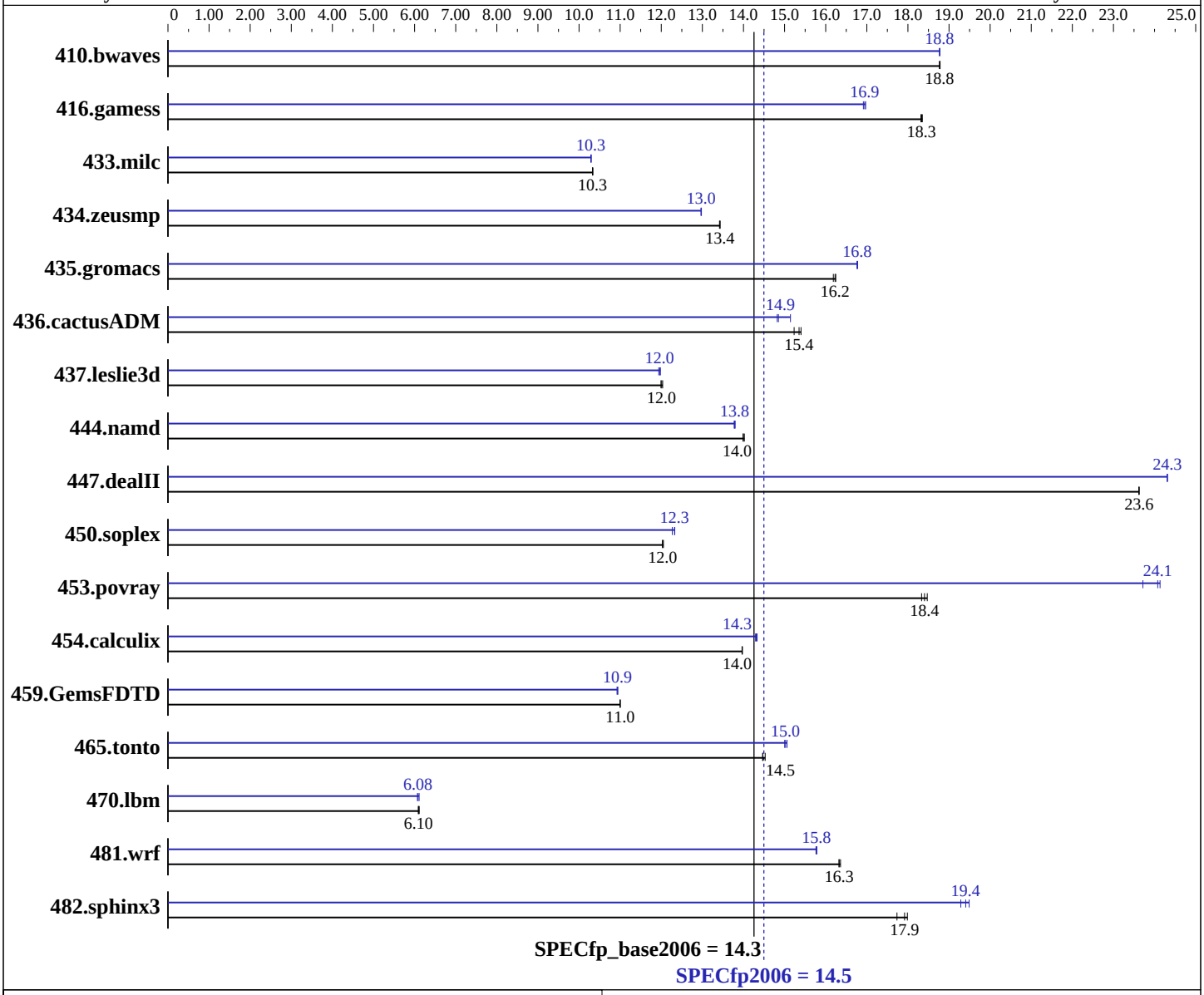
NovaScale R440
(Intel Xeon processor X5355,2.66GHz)

SPECfp®2006 = 14.5

SPECfp_base2006 = 14.3

**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<br>Package ID l_cc_c_9.1.045 Build no 20061101<br>Intel Fortran Compiler for Intel EM64T-based applications, Version 9.1<br>Package ID l_fc_c_9.1.040 Build no 20061101 |
| Auto Parallel: | No |

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| | | | |
|---|---|---|---|
| L3 Cache: | None | File System: | ext2 |
| Other Cache: | None | System State: | Multi-user run level 3 |
| Memory: | 24 GB (12x2 GB) FB-DIMM PC2-5300F ECC CL5 | Base Pointers: | 64-bit |
| Disk Subsystem: | 1x73 GB SAS, 10000 RPM | Peak Pointers: | 32/64-bit |
| Other Hardware: | None | Other Software: | None |

## Results Table

| Benchmark | Base | | | | | | Peak | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves | 724 | 18.8 | 724 | 18.8 | **724** | **18.8** | **724** | **18.8** | 724 | 18.8 | 724 | 18.8 |
| 416.gamess | 1069 | 18.3 | 1067 | 18.4 | **1068** | **18.3** | 1154 | 17.0 | **1155** | **16.9** | 1157 | 16.9 |
| 433.milc | 889 | 10.3 | **889** | **10.3** | 888 | 10.3 | 892 | 10.3 | 892 | 10.3 | **892** | **10.3** |
| 434.zeusmp | 678 | 13.4 | **678** | **13.4** | 678 | 13.4 | 701 | 13.0 | 702 | 13.0 | **702** | **13.0** |
| 435.gromacs | **440** | **16.2** | 440 | 16.2 | 441 | 16.2 | 426 | 16.8 | **426** | **16.8** | 426 | 16.8 |
| 436.cactusADM | **778** | **15.4** | 785 | 15.2 | 776 | 15.4 | **805** | **14.9** | 789 | 15.1 | 806 | 14.8 |
| 437.leslie3d | **783** | **12.0** | 784 | 12.0 | 781 | 12.0 | 785 | 12.0 | **786** | **12.0** | 787 | 11.9 |
| 444.namd | **573** | **14.0** | 572 | 14.0 | 573 | 14.0 | **582** | **13.8** | 582 | 13.8 | 581 | 13.8 |
| 447.dealII | **484** | **23.6** | 484 | 23.6 | 484 | 23.6 | **471** | **24.3** | 471 | 24.3 | 471 | 24.3 |
| 450.soplex | 693 | 12.0 | **693** | **12.0** | 692 | 12.1 | 676 | 12.3 | **677** | **12.3** | 680 | 12.3 |
| 453.povray | 290 | 18.3 | 288 | 18.5 | **289** | **18.4** | 220 | 24.1 | 224 | 23.7 | **221** | **24.1** |
| 454.calculix | **591** | **14.0** | 590 | 14.0 | 591 | 14.0 | 576 | 14.3 | **577** | **14.3** | 577 | 14.3 |
| 459.GemsFDTD | **965** | **11.0** | 965 | 11.0 | 964 | 11.0 | 970 | 10.9 | 971 | 10.9 | **970** | **10.9** |
| 465.tonto | 677 | 14.5 | 680 | 14.5 | **680** | **14.5** | 653 | 15.1 | **655** | **15.0** | 656 | 15.0 |
| 470.lbm | 2248 | 6.11 | **2254** | **6.10** | 2257 | 6.09 | 2249 | 6.11 | **2258** | **6.08** | 2264 | 6.07 |
| 481.wrf | 684 | 16.3 | **684** | **16.3** | 683 | 16.4 | **708** | **15.8** | 709 | 15.8 | 708 | 15.8 |
| 482.sphinx3 | 1084 | 18.0 | **1088** | **17.9** | 1099 | 17.7 | 1000 | 19.5 | **1004** | **19.4** | 1011 | 19.3 |

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 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

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

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 11:40:35 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 29 May 2007.