



# SPEC® CFP2006 Result

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## IBM Corporation

## SPECfp®\_rate2006 = Not Run

## IBM System x3650 (Intel Xeon E5440)

## SPECfp\_rate\_base2006 = 66.6

CPU2006 license: 11

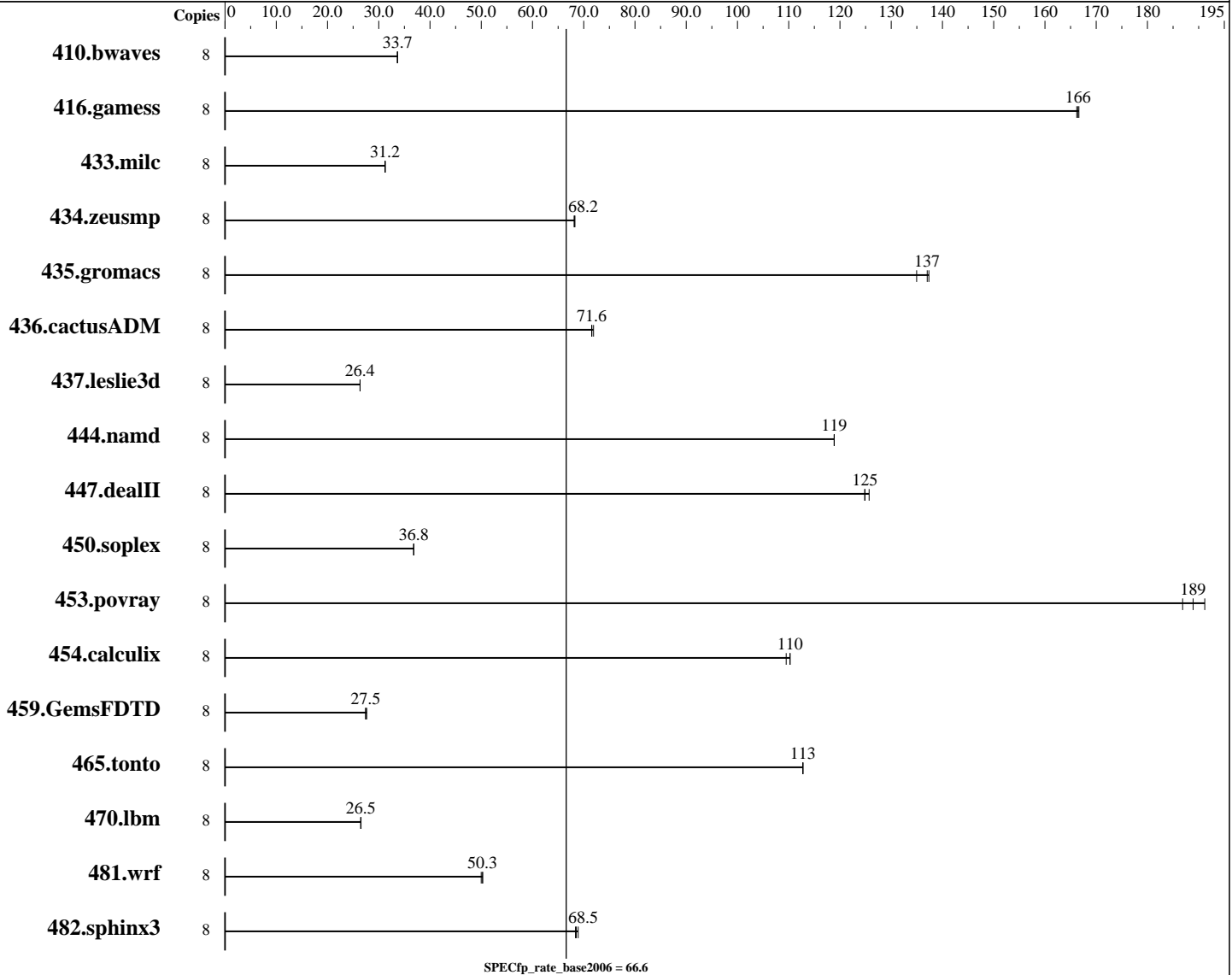
Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Jan-2008

Hardware Availability: Jan-2008

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon E5440  
 CPU Characteristics: 1333MHz system bus  
 CPU MHz: 2826  
 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: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

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### Software

Operating System: SuSE Linux Enterprise Server 10 (x86\_64), kernel 2.6.16.21-0.8-smp  
 Compiler: Intel C++ and Fortran Compiler 10.1 for Linux Build 20070913 Package ID: l\_cc\_p\_10.1.008, l\_fc\_p\_10.1.008  
 Auto Parallel: No  
 File System: ReiserFS  
 System State: Multi-user, run level 3  
 Base Pointers: 64-bit

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L3 Cache: None  
Other Cache: None  
Memory: 16 GB (8 x 2 GB DDR2-5300F ECC)  
Disk Subsystem: 1 x 36 GB SAS, 15000 RPM  
Other Hardware: None

Peak Pointers: Not Applicable  
Other Software: Binutils 2.17.50.0.15

## Results Table

| Benchmark     | Base   |             |             |             |             |             |             | Peak   |         |       |         |       |         |       |
|---------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------|---------|-------|---------|-------|---------|-------|
|               | Copies | Seconds     | Ratio       | Seconds     | Ratio       | Seconds     | Ratio       | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves    | 8      | 3232        | 33.6        | 3230        | 33.7        | <u>3231</u> | <u>33.7</u> |        |         |       |         |       |         |       |
| 416.gamess    | 8      | <u>941</u>  | <u>166</u>  | 942         | 166         | 940         | 167         |        |         |       |         |       |         |       |
| 433.milc      | 8      | 2353        | 31.2        | 2348        | 31.3        | <u>2352</u> | <u>31.2</u> |        |         |       |         |       |         |       |
| 434.zeusmp    | 8      | 1066        | 68.3        | <u>1068</u> | <u>68.2</u> | 1068        | 68.1        |        |         |       |         |       |         |       |
| 435.gromacs   | 8      | 416         | 137         | 423         | 135         | <u>417</u>  | <u>137</u>  |        |         |       |         |       |         |       |
| 436.cactusADM | 8      | <u>1335</u> | <u>71.6</u> | 1329        | 71.9        | 1336        | 71.5        |        |         |       |         |       |         |       |
| 437.leslie3d  | 8      | 2854        | 26.4        | <u>2853</u> | <u>26.4</u> | 2853        | 26.4        |        |         |       |         |       |         |       |
| 444.namd      | 8      | <u>540</u>  | <u>119</u>  | 540         | 119         | 540         | 119         |        |         |       |         |       |         |       |
| 447.dealII    | 8      | 728         | 126         | <u>733</u>  | <u>125</u>  | 733         | 125         |        |         |       |         |       |         |       |
| 450.soplex    | 8      | <u>1811</u> | <u>36.8</u> | 1812        | 36.8        | 1811        | 36.8        |        |         |       |         |       |         |       |
| 453.povray    | 8      | 223         | 191         | <u>225</u>  | <u>189</u>  | 228         | 187         |        |         |       |         |       |         |       |
| 454.calculix  | 8      | 599         | 110         | 603         | 110         | <u>599</u>  | <u>110</u>  |        |         |       |         |       |         |       |
| 459.GemsFDTD  | 8      | <u>3091</u> | <u>27.5</u> | 3070        | 27.7        | 3095        | 27.4        |        |         |       |         |       |         |       |
| 465.tonto     | 8      | 698         | 113         | <u>698</u>  | <u>113</u>  | 698         | 113         |        |         |       |         |       |         |       |
| 470.lbm       | 8      | <u>4145</u> | <u>26.5</u> | 4153        | 26.5        | 4142        | 26.5        |        |         |       |         |       |         |       |
| 481.wrf       | 8      | <u>1778</u> | <u>50.3</u> | 1788        | 50.0        | 1777        | 50.3        |        |         |       |         |       |         |       |
| 482.sphinx3   | 8      | 2262        | 68.9        | <u>2275</u> | <u>68.5</u> | 2280        | 68.4        |        |         |       |         |       |         |       |

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

## General Notes

All benchmarks compiled in 64-bit mode  
Hardware Sector Prefetch Disabled and Adjacent Sector Prefetch Disabled  
Powersaved daemon was disabled in OS  
taskset utility used to bind CPU(s) to processes

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

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## Base Compiler Invocation (Continued)

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

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

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.14.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.14.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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