# SPEC® CFP2006 Result

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## IBM Corporation

$SPECfp®\_rate2006 =$ Not Run

### IBM BladeCenter HS21 XM (Intel Xeon 5120)

$SPECfp\_rate\_base2006 =$ 29.3
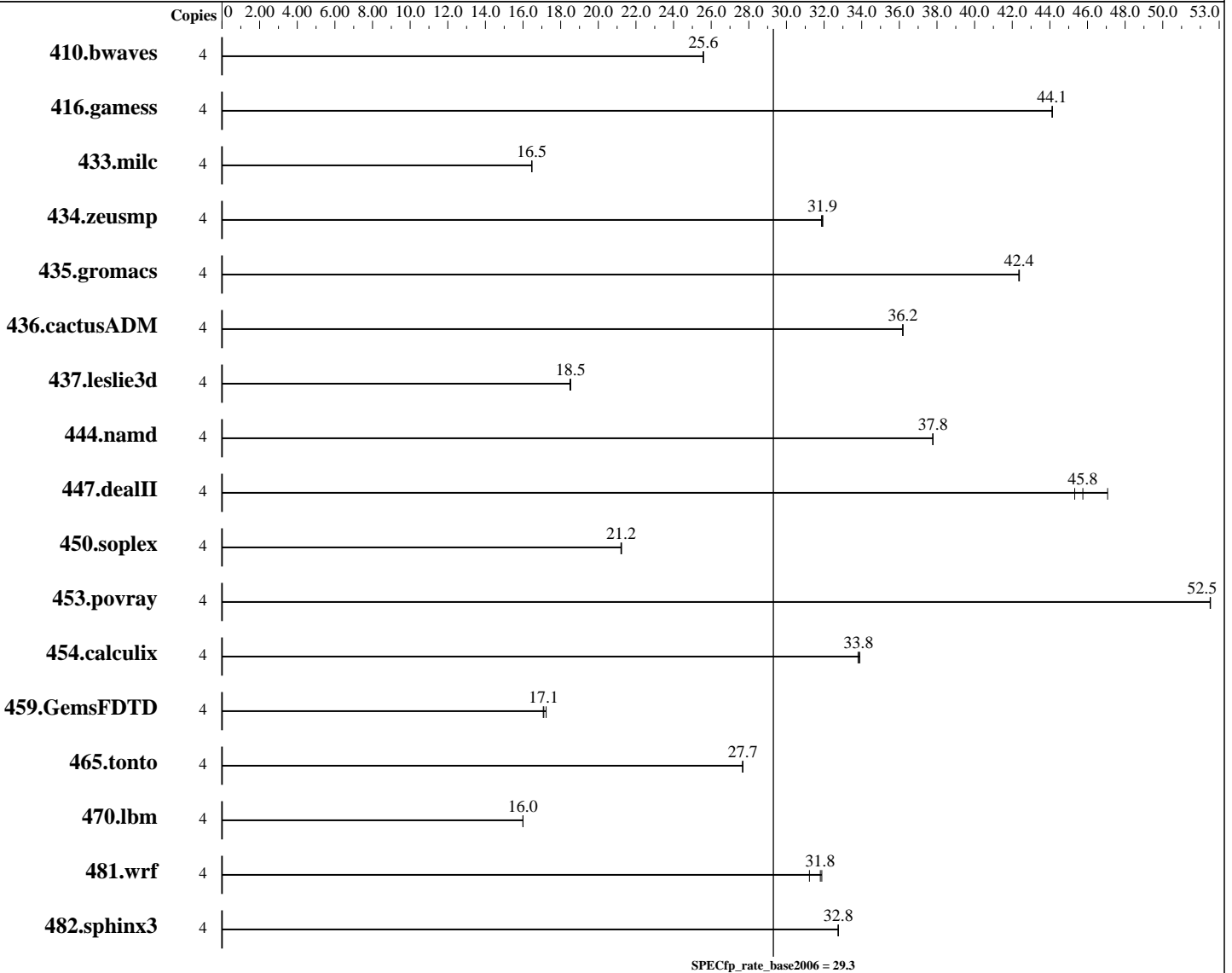
**CPU2006 license:** 11
**Test sponsor:** IBM Corporation
**Tested by:** IBM Corporation

**Test date:** Jan-2007
**Hardware Availability:** Feb-2007
**Software Availability:** Aug-2006

| Benchmark | Copies | Result |
|-----------|--------|--------|
| 410.bwaves | 4 | 25.6 |
| 416.gamess | 4 | 44.1 |
| 433.milc | 4 | 16.5 |
| 434.zeusmp | 4 | 31.9 |
| 435.gromacs | 4 | 42.4 |
| 436.cactusADM | 4 | 36.2 |
| 437.leslie3d | 4 | 18.5 |
| 444.namd | 4 | 37.8 |
| 447.dealII | 4 | 45.8 |
| 450.soplex | 4 | 21.2 |
| 453.povray | 4 | 52.5 |
| 454.calculix | 4 | 33.8 |
| 459.GemsFDTD | 4 | 17.1 |
| 465.tonto | 4 | 27.7 |
| 470.lbm | 4 | 16.0 |
| 481.wrf | 4 | 31.8 |
| 482.sphinx3 | 4 | 32.8 |

SPECfp_rate_base2006 = 29.3

## Hardware

CPU Name: Intel Xeon 5120
CPU Characteristics: 1066MHz system bus
CPU MHz: 1866
FPU: Integrated
CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
CPU(s) orderable: 1,2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 4 MB I+D on chip per chip

**Continued on next page**

## Software

Operating System: Microsoft Windows Server 2003 Enterprise x64 Edition + SP1 (64-bit)
Compiler: Intel C++ Compiler for IA32 version 9.1 Build no 20060816
Intel Fortran Compiler for IA32 version 9.1 Build no 20060816
Microsoft Visual Studio .Net 2003 (for libraries)
Auto Parallel: No
File System: NTFS

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8 x 2GB DDR2-5300F ECC)
Disk Subsystem: 1 x 74 GB SAS, 1000 RPM
Other Hardware: None

System State: Default
Base Pointers: 32-bit
Peak Pointers: Not Applicable
Other Software: Smart Heap Library, Version 8

## Results Table

| Benchmark | Copies | Base Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Peak Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 410.bwaves | 4 | 2125 | 25.6 | 2125 | 25.6 | **2125** | **25.6** | | | | | | | |
| 416.gamess | 4 | **1775** | **44.1** | 1775 | 44.1 | 1775 | 44.1 | | | | | | | |
| 433.milc | 4 | 2230 | 16.5 | 2230 | 16.5 | **2230** | **16.5** | | | | | | | |
| 434.zeusmp | 4 | **1141** | **31.9** | 1140 | 31.9 | 1142 | 31.9 | | | | | | | |
| 435.gromacs | 4 | 674 | 42.4 | 674 | 42.4 | **674** | **42.4** | | | | | | | |
| 436.cactusADM | 4 | 1321 | 36.2 | 1321 | 36.2 | **1321** | **36.2** | | | | | | | |
| 437.leslie3d | 4 | 2033 | 18.5 | **2030** | **18.5** | 2029 | 18.5 | | | | | | | |
| 444.namd | 4 | 849 | 37.8 | **849** | **37.8** | 849 | 37.8 | | | | | | | |
| 447.dealII | 4 | **1000** | **45.8** | 972 | 47.1 | 1010 | 45.3 | | | | | | | |
| 450.soplex | 4 | **1572** | **21.2** | 1573 | 21.2 | 1571 | 21.2 | | | | | | | |
| 453.povray | 4 | 405 | 52.5 | **405** | **52.5** | 405 | 52.5 | | | | | | | |
| 454.calculix | 4 | **975** | **33.8** | 973 | 33.9 | 976 | 33.8 | | | | | | | |
| 459.GemsFDTD | 4 | 2486 | 17.1 | **2481** | **17.1** | 2463 | 17.2 | | | | | | | |
| 465.tonto | 4 | **1422** | **27.7** | 1422 | 27.7 | 1423 | 27.7 | | | | | | | |
| 470.lbm | 4 | 3436 | 16.0 | **3435** | **16.0** | 3435 | 16.0 | | | | | | | |
| 481.wrf | 4 | **1405** | **31.8** | 1402 | 31.9 | 1431 | 31.2 | | | | | | | |
| 482.sphinx3 | 4 | **2380** | **32.8** | 2381 | 32.7 | 2380 | 32.8 | | | | | | | |

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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## 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
```

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic91-flags.20090714.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic91-flags.20090714.xml

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For other inquiries, please contact webmaster@spec.org.

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