SPEC® CFP2006 Result
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IBM Corporation

$SPECfp®\_rate2006 =$ Not Run

IBM BladeCenter HS21 XM (Intel Xeon E5345)
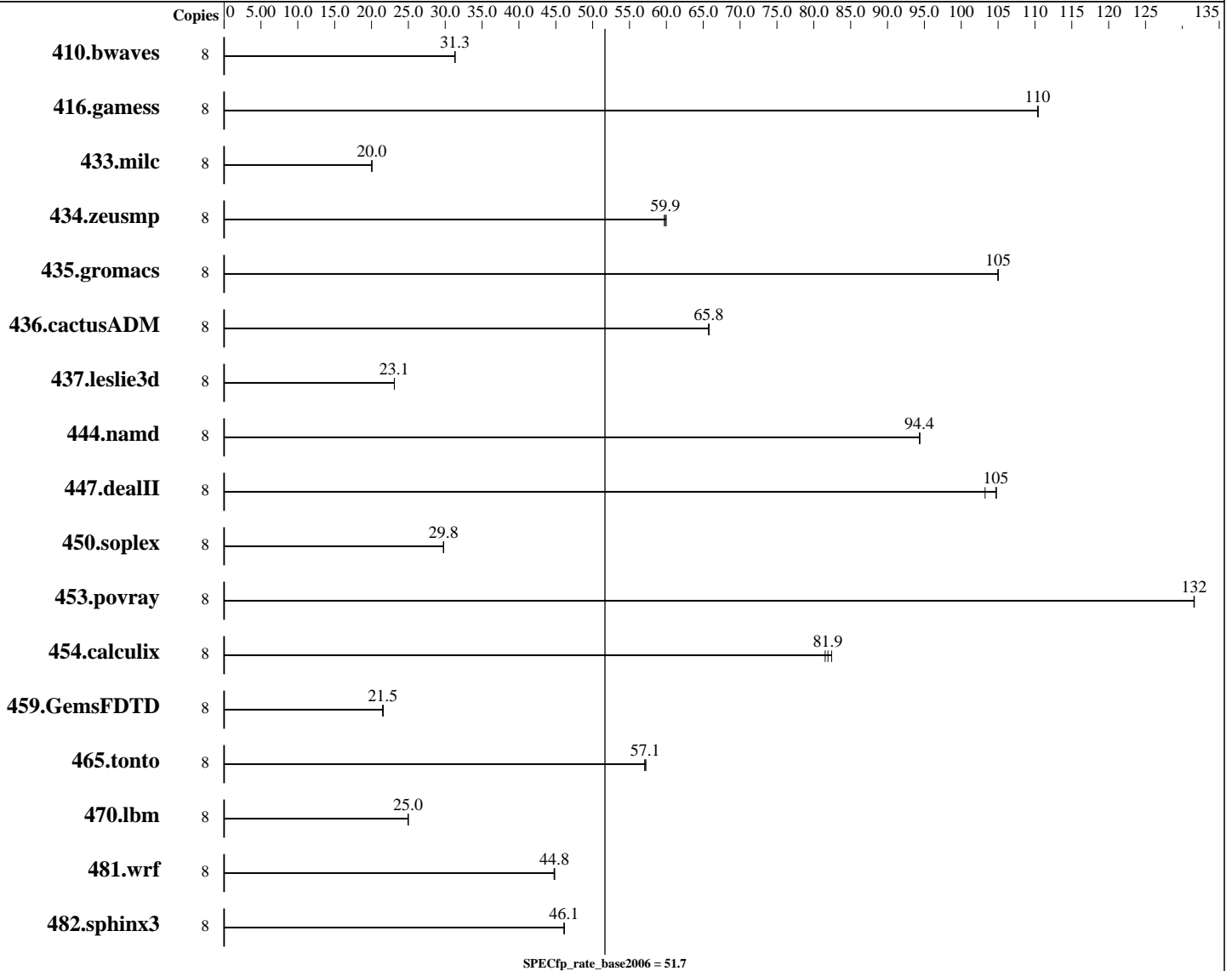
$SPECfp\_rate\_base2006 =$ 51.7

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

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

Copies — scale: 0 5.00 10.0 15.0 20.0 25.0 30.0 35.0 40.0 45.0 50.0 55.0 60.0 65.0 70.0 75.0 80.0 85.0 90.0 95.0 100 105 110 115 120 125 135

Benchmark	Copies	Result
410.bwaves	8	31.3
416.gamess	8	110
433.milc	8	20.0
434.zeusmp	8	59.9
435.gromacs	8	105
436.cactusADM	8	65.8
437.leslie3d	8	23.1
444.namd	8	94.4
447.dealII	8	105
450.soplex	8	29.8
453.povray	8	132
454.calculix	8	81.9
459.GemsFDTD	8	21.5
465.tonto	8	57.1
470.lbm	8	25.0
481.wrf	8	44.8
482.sphinx3	8	46.1

SPECfp_rate_base2006 = 51.7

Hardware

CPU Name: Intel Xeon E5345
CPU Characteristics: 1333MHz system bus
CPU MHz: 2333
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: 8 MB I+D on chip per chip, 4 MB shared / 2 cores

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	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3472	31.3	**3472**	**31.3**	3470	31.3							
416.gamess	8	1418	110	**1419**	**110**	1419	110							
433.milc	8	3666	20.0	3663	20.0	**3664**	**20.0**							
434.zeusmp	8	1214	60.0	**1216**	**59.9**	1219	59.7							
435.gromacs	8	**544**	**105**	544	105	544	105							
436.cactusADM	8	1454	65.7	**1454**	**65.8**	1453	65.8							
437.leslie3d	8	3256	23.1	**3256**	**23.1**	3256	23.1							
444.namd	8	680	94.4	680	94.3	**680**	**94.4**							
447.dealII	8	887	103	**874**	**105**	873	105							
450.soplex	8	2243	29.7	**2240**	**29.8**	2239	29.8							
453.povray	8	323	132	323	132	**323**	**132**							
454.calculix	8	801	82.4	**806**	**81.9**	809	81.5							
459.GemsFDTD	8	**3941**	**21.5**	3930	21.6	3945	21.5							
465.tonto	8	**1378**	**57.1**	1380	57.1	1376	57.2							
470.lbm	8	**4402**	**25.0**	4402	25.0	4401	25.0							
481.wrf	8	1993	44.8	**1993**	**44.8**	1996	44.8							
482.sphinx3	8	3379	46.1	3380	46.1	**3379**	**46.1**							

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

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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