SPEC® CFP2006 Result
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IBM Corporation

IBM BladeCenter HS21 (Intel Xeon E5405)

$SPECfp^{®}\_rate2006 =$ Not Run

$SPECfp\_rate\_base2006 =$ 57.9

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

Benchmark	Copies	Result
410.bwaves	8	33.7
416.gamess	8	118
433.milc	8	29.0
434.zeusmp	8	62.8
435.gromacs	8	99.0
436.cactusADM	8	66.7
437.leslie3d	8	26.3
444.namd	8	84.5
447.dealII	8	106
450.soplex	8	36.0
453.povray	8	135
454.calculix	8	82.8
459.GemsFDTD	8	27.7
465.tonto	8	90.5
470.lbm	8	26.0
481.wrf	8	49.9
482.sphinx3	8	63.5

SPECfp_rate_base2006 = 57.9

Hardware
CPU Name: Intel Xeon E5405
CPU Characteristics: 1333MHz system bus
CPU MHz: 2000
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

Continued on next page

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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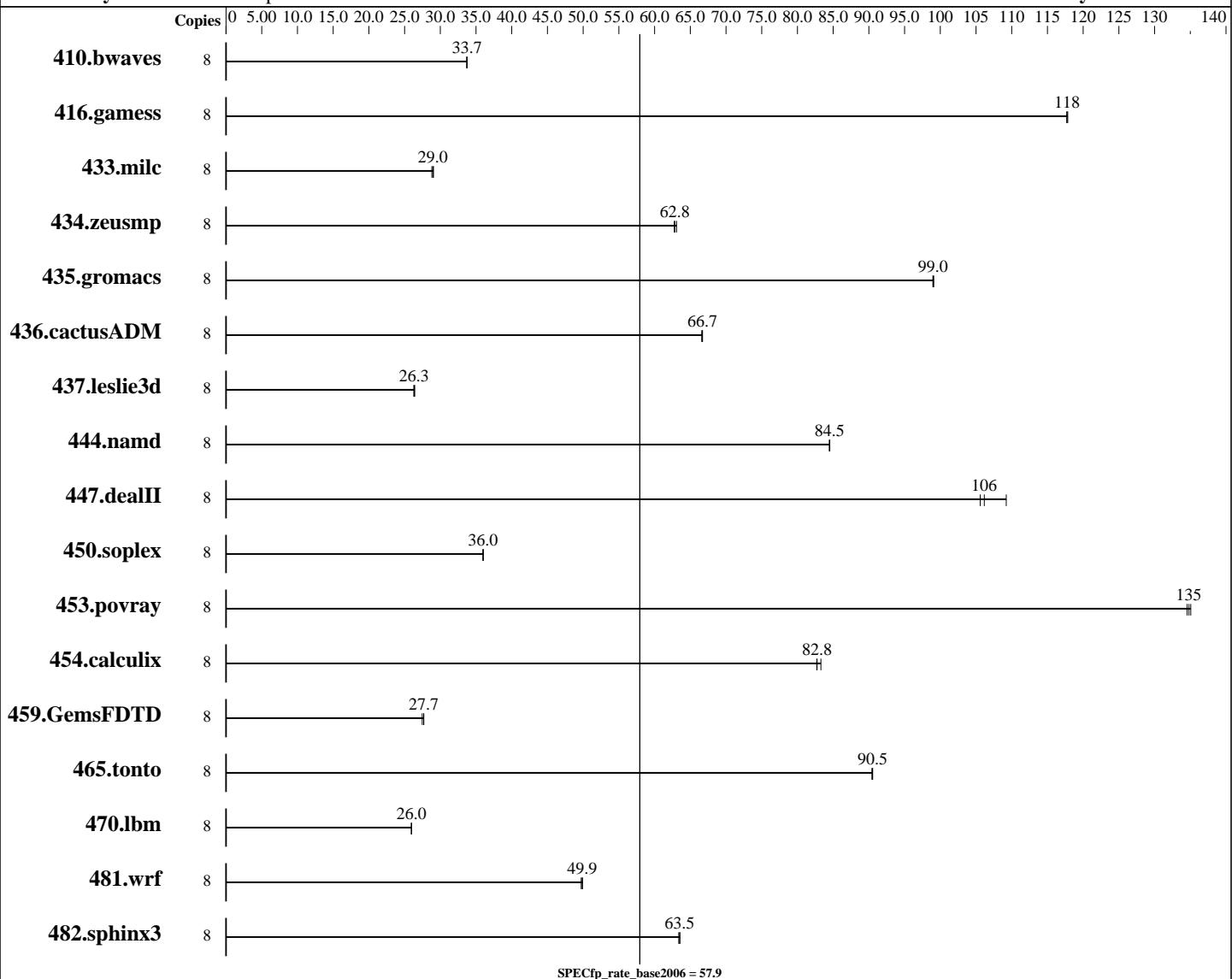
CPU2006 license: 11	**Test date:** Jan-2008
Test sponsor: IBM Corporation	**Hardware Availability:** Jan-2008
Tested by: IBM Corporation	**Software Availability:** Nov-2007

L3 Cache:	None	Peak Pointers:	Not Applicable
Other Cache:	None	Other Software:	Binutils 2.17.50.0.15
Memory:	16 GB (8 x 2 GB DDR2-5300F ECC)		
Disk Subsystem:	1 x 36 GB SAS, 10000 RPM		
Other Hardware:	None		

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	**3223**	**33.7**	3223	33.7	3225	33.7							
416.gamess	8	1331	118	1329	118	**1330**	**118**							
433.milc	8	2529	29.0	2549	28.8	**2536**	**29.0**							
434.zeusmp	8	**1159**	**62.8**	1160	62.8	1154	63.1							
435.gromacs	8	576	99.1	**577**	**99.0**	577	99.0							
436.cactusADM	8	**1433**	**66.7**	1433	66.7	1435	66.6							
437.leslie3d	8	2859	26.3	2846	26.4	**2856**	**26.3**							
444.namd	8	760	84.5	759	84.5	**759**	**84.5**							
447.dealII	8	**862**	**106**	867	106	838	109							
450.soplex	8	1854	36.0	1853	36.0	**1854**	**36.0**							
453.povray	8	316	135	315	135	**316**	**135**							
454.calculix	8	**798**	**82.8**	792	83.3	798	82.7							
459.GemsFDTD	8	3090	27.5	**3068**	**27.7**	3066	27.7							
465.tonto	8	**870**	**90.5**	870	90.5	871	90.4							
470.lbm	8	4235	26.0	4233	26.0	**4234**	**26.0**							
481.wrf	8	**1792**	**49.9**	1797	49.7	1790	49.9							
482.sphinx3	8	2460	63.4	**2455**	**63.5**	2454	63.5							

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
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.20090714.11.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.20090714.11.xml

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Hardware Availability: Jan-2008
Software Availability: Nov-2007

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

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