SPEC® CFP2006 Result

Supermicro
(Test Sponsor: Advanced Micro Devices)

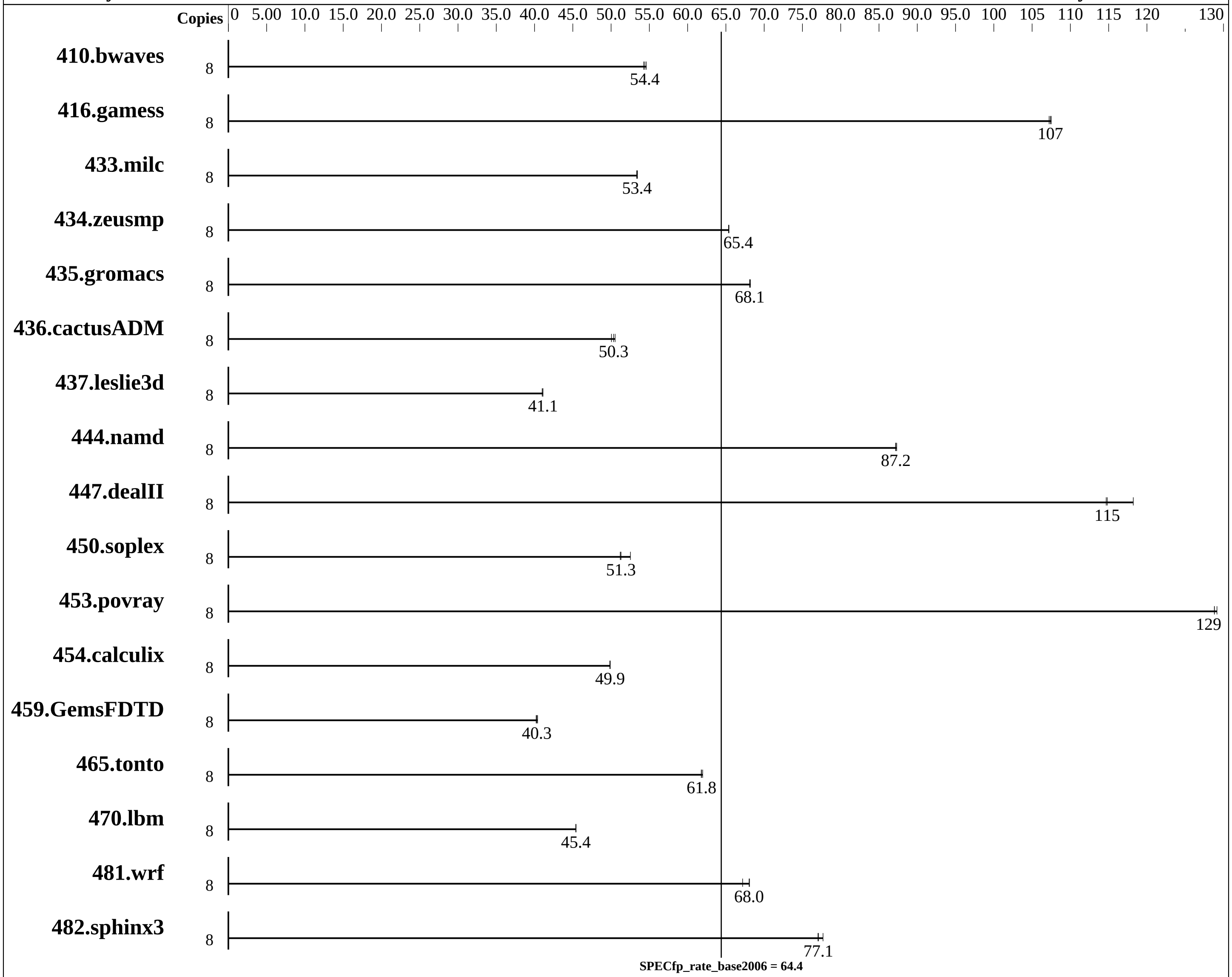
A+ Server 2021M-UR+B, AMD Opteron 2356

SPECfp®_rate2006 = Not Run

SPECfp_rate_base2006 = 64.4

CPU2006 license: 49
Test sponsor: Advanced Micro Devices
Tested by: Advanced Micro Devices

Test date: Apr-2008
Hardware Availability: Apr-2008
Software Availability: Mar-2008



Hardware

CPU Name:	AMD Opteron 2356
CPU Characteristics:	
CPU MHz:	2300
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	512 KB I+D on chip per core

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Software

Operating System:	SuSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
Compiler:	gcc, g++, gfortran 4.3.0
Auto Parallel:	No
File System:	ext3
System State:	Runlevel 3 (Full multiuser with network)
Base Pointers:	64-bit
Peak Pointers:	Not Applicable
Other Software:	None

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L3 Cache: 2 MB I+D on chip per chip
Other Cache: None
Memory: 16 GB (8 x 2GB, DDR2-667 CL5 ECC Reg Dual Rank)
Disk Subsystem: 1 x 120 GB SATA, 7200 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	1991	54.6	**1998**	**54.4**	2004	54.3							
416.gamess	8	**1459**	**107**	1461	107	1457	107							
433.milc	8	1374	53.4	**1376**	**53.4**	1377	53.3							
434.zeusmp	8	**1114**	**65.4**	1114	65.3	1113	65.4							
435.gromacs	8	837	68.2	**838**	**68.1**	839	68.1							
436.cactusADM	8	**1899**	**50.3**	1910	50.1	1892	50.5							
437.leslie3d	8	1829	41.1	**1830**	**41.1**	1834	41.0							
444.namd	8	735	87.3	**736**	**87.2**	736	87.2							
447.dealII	8	774	118	**797**	**115**	798	115							
450.soplex	8	1270	52.5	**1301**	**51.3**	1303	51.2							
453.povray	8	**330**	**129**	330	129	330	129							
454.calculix	8	1323	49.9	**1323**	**49.9**	1324	49.8							
459.GemsFDTD	8	2101	40.4	**2107**	**40.3**	2111	40.2							
465.tonto	8	1270	62.0	1274	61.8	**1274**	**61.8**							
470.lbm	8	2420	45.4	**2421**	**45.4**	2422	45.4							
481.wrf	8	**1314**	**68.0**	1313	68.1	1330	67.2							
482.sphinx3	8	2007	77.7	**2023**	**77.1**	2024	77.0							

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

Operating System Notes

'numactl' was used to bind copies to the cores

Base Compiler Invocation

C benchmarks:
```
gcc
```

C++ benchmarks:
```
g++
```

Fortran benchmarks:
```
gfortran
```

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Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C:
`gcc gfortran`

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`
436.cactusADM: `-DSPEC_CPU_LP64`
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`
459.GemsFDTD: `-DSPEC_CPU_LP64`
465.tonto: `-DSPEC_CPU_LP64`
470.lbm: `-DSPEC_CPU_LP64`
481.wrf: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX -DSPEC_CPU_CASE_FLAG`
482.sphinx3: `-DSPEC_CPU_LP64`

Base Optimization Flags

C benchmarks:
`-O3 -funroll-loops -fno-strict-aliasing`

C++ benchmarks:
`-O3 -funroll-loops -fno-strict-aliasing`

Fortran benchmarks:
`-O3 -funroll-loops -fno-strict-aliasing`

Benchmarks using both Fortran and C:
`-O3 -funroll-loops -fno-strict-aliasing`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.04.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.04.xml

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

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