SPEC® CFP2006 Result

Intel Corporation

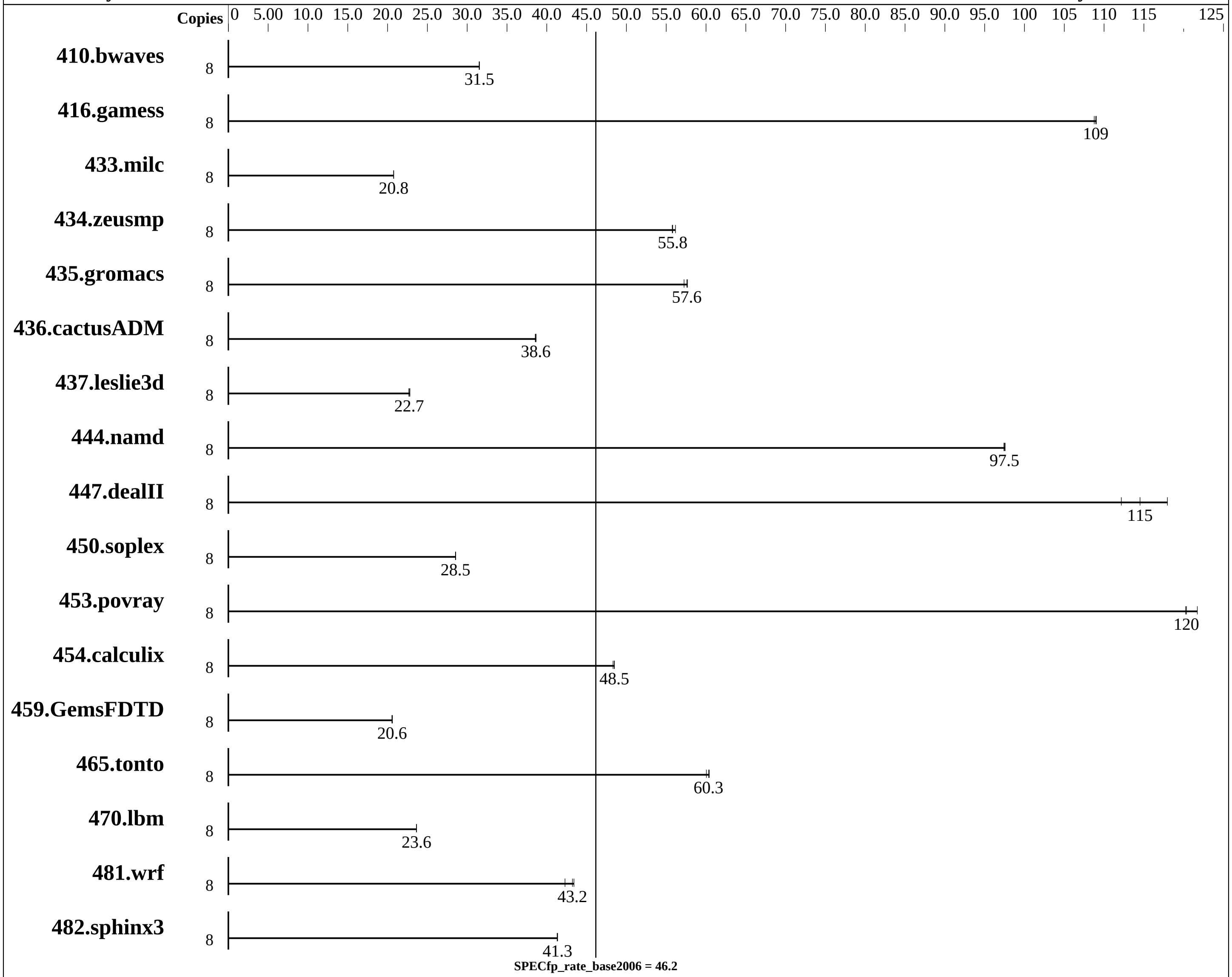
(Test Sponsor: Advanced Micro Devices)

Intel S5000PAL Server Board, Intel Xeon processor E5345, 2.33 GHz

SPECfp®_rate2006 = Not Run

SPECfp_rate_base2006 = 46.2

CPU2006 license:	49	**Test date:**	Sep-2007
Test sponsor:	Advanced Micro Devices	**Hardware Availability:**	May-2007
Tested by:	Advanced Micro Devices	**Software Availability:**	Jul-2007



Hardware

CPU Name:	Intel Xeon E5345
CPU Characteristics:	
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

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Software

Operating System:	SuSE Linux Enterprise Server 10 SP1 64-bit kernel
Compiler:	gcc, g++, gfortran 4.1.2
Auto Parallel:	No
File System:	ext3
System State:	Multi-user, run level 3
Base Pointers:	64-bit
Peak Pointers:	Not Applicable
Other Software:	None

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L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8x2GB, DDR2-667 FBDIMM CL5 Reg Dual Rank)
Disk Subsystem:	1x250GB SATA, 7200 RPM
Other Hardware:	None

Results Table

	Base							Peak						
Benchmark	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
410.bwaves	8	**3448**	**31.5**	3451	31.5	3446	31.5							
416.gamess	8	1437	109	1440	109	**1438**	**109**							
433.milc	8	3538	20.8	**3536**	**20.8**	3535	20.8							
434.zeusmp	8	**1304**	**55.8**	1306	55.8	1296	56.2							
435.gromacs	8	990	57.7	**992**	**57.6**	998	57.2							
436.cactusADM	8	**2476**	**38.6**	2480	38.6	2473	38.7							
437.leslie3d	8	3316	22.7	**3310**	**22.7**	3297	22.8							
444.namd	8	659	97.4	**658**	**97.5**	658	97.6							
447.dealII	8	776	118	**799**	**115**	816	112							
450.soplex	8	**2338**	**28.5**	2339	28.5	2336	28.6							
453.povray	8	354	120	350	122	**354**	**120**							
454.calculix	8	**1361**	**48.5**	1361	48.5	1366	48.3							
459.GemsFDTD	8	4118	20.6	4132	20.5	**4126**	**20.6**							
465.tonto	8	1303	60.4	**1305**	**60.3**	1311	60.0							
470.lbm	8	4651	23.6	**4650**	**23.6**	4649	23.6							
481.wrf	8	2113	42.3	**2068**	**43.2**	2058	43.4							
482.sphinx3	8	3770	41.4	3776	41.3	**3771**	**41.3**							

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
```

General Notes

```
"powersave -f" used to set speed to maximum
wrf needs wrf_data_header_size 8
to read the unformatted data input file correctly

The test system can be assembled using a
Delta TDPS-600AB 600W 12V power supply.
```

Base Compiler Invocation

C benchmarks:
`gcc`

C++ benchmarks:
`g++`

Fortran benchmarks:
`gfortran`

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_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
`-O3 -fno-inline-functions -funroll-loops`

C++ benchmarks:
`-O3 -funroll-loops`

Fortran benchmarks:
`-O3 -fno-inline-functions -funroll-loops`

Benchmarks using both Fortran and C:
`-O3 -fno-inline-functions -funroll-loops`

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.03.html

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.03.xml

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

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