SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

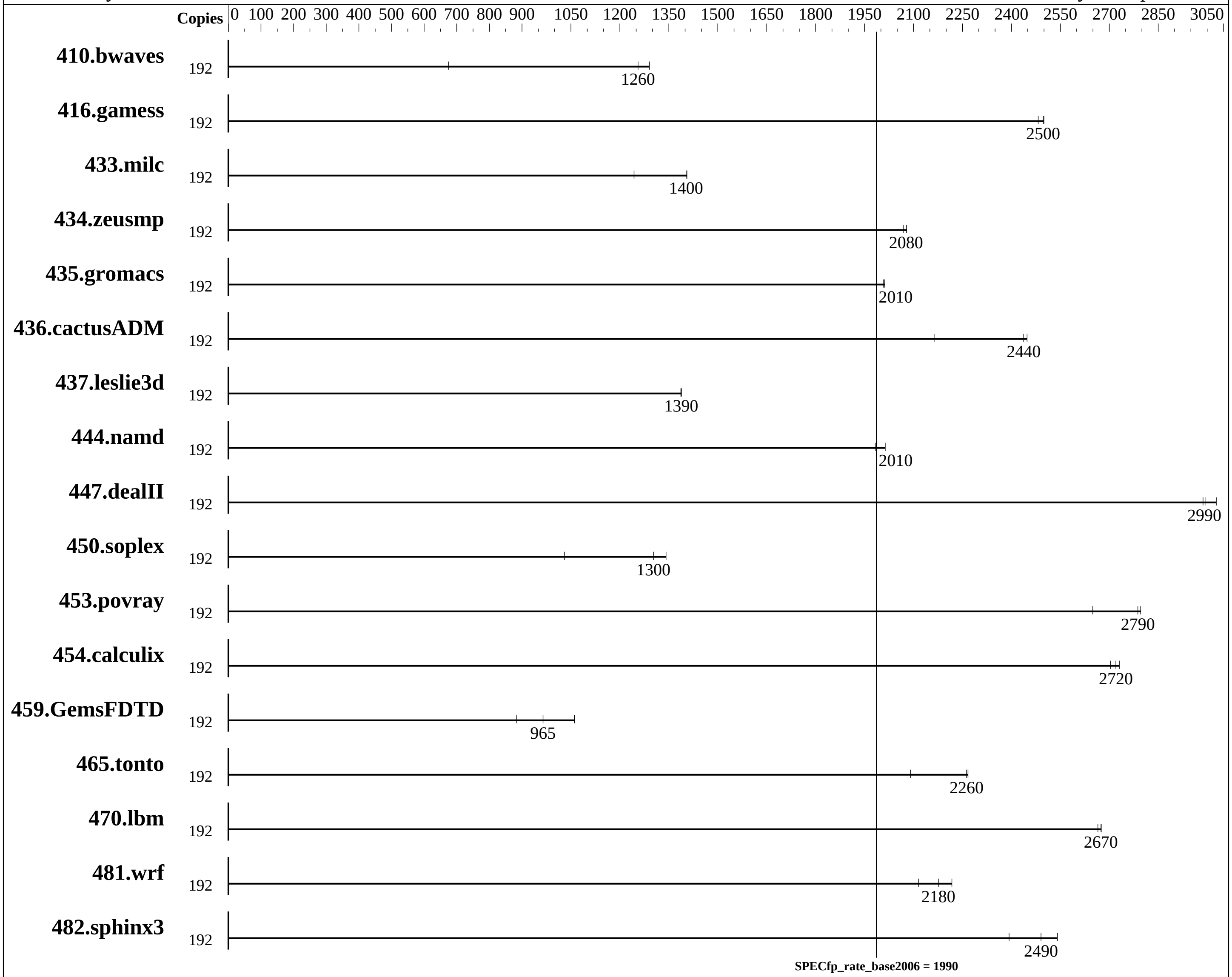
ScaleMP

vSMP Foundation (AMD Opteron 6172, 2.10 GHz)

SPECfp®_rate2006 = Not Run

SPECfp_rate_base2006 = 1990

CPU2006 license:	2929	**Test date:**	Sep-2011
Test sponsor:	ScaleMP	**Hardware Availability:**	Aug-2010
Tested by:	ScaleMP	**Software Availability:**	Sep-2011



Hardware

CPU Name:	AMD Opteron 6172
CPU Characteristics:	
CPU MHz:	2100
FPU:	Integrated
CPU(s) enabled:	192 cores, 16 chips, 12 cores/chip
CPU(s) orderable:	2 to 64 boards with 2 to 4 chips per board
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	512 KB I+D on chip per core

Continued on next page

Software

Operating System:	Red Hat Enterprise Linux Server release 5.5 (Tikanga) Kernel 2.6.32.46-5.vSMP
Compiler:	C/C++/Fortran: Version 4.2.4 of Open64 Compiler Suite
Auto Parallel:	No
File System:	xfs
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit

Continued on next page

ScaleMP

vSMP Foundation (AMD Opteron 6172, 2.10 GHz)

SPECfp_rate2006 = Not Run

SPECfp_rate_base2006 = 1990

CPU2006 license: 2929
Test sponsor: ScaleMP
Tested by: ScaleMP
Test date: Sep-2011
Hardware Availability: Aug-2010
Software Availability: Sep-2011

L3 Cache: 12 MB I+D on chip per chip, 6 MB shared / 6 cores
Other Cache: 60 GB I+D off chip per system
Memory: 512 GB (8 x 16 x 4 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 8 x 250 GB SATA, 7200 RPM
Other Hardware: None

Peak Pointers: Not Applicable
Other Software: ScaleMP vSMP Foundation 3.5.284, released Sep. 13, 2011

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	192	3867	675	2022	1290	**2078**	**1260**							
416.gamess	192	**1505**	**2500**	1515	2480	1504	2500							
433.milc	192	1417	1240	1254	1410	**1256**	**1400**							
434.zeusmp	192	840	2080	844	2070	**841**	**2080**							
435.gromacs	192	690	1990	681	2010	**683**	**2010**							
436.cactusADM	192	1061	2160	937	2450	**941**	**2440**							
437.leslie3d	192	1300	1390	**1300**	**1390**	1301	1390							
444.namd	192	777	1980	**765**	**2010**	765	2010							
447.dealII	192	**734**	**2990**	725	3030	735	2990							
450.soplex	192	1554	1030	1194	1340	**1229**	**1300**							
453.povray	192	386	2650	**366**	**2790**	365	2800							
454.calculix	192	**582**	**2720**	580	2730	586	2700							
459.GemsFDTD	192	1920	1060	2308	883	**2112**	**965**							
465.tonto	192	903	2090	**835**	**2260**	833	2270							
470.lbm	192	**986**	**2670**	990	2660	986	2680							
481.wrf	192	**986**	**2180**	1014	2120	967	2220							
482.sphinx3	192	1473	2540	**1502**	**2490**	1564	2390							

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

Submit Notes

```
The config file option 'submit' was used.
The taskset command was used to bind processes to cores.
```

Operating System Notes

```
'ulimit -s unlimited' was used to set environment stack size
'ulimit -l 2097152'  was used to set environment locked pages in memory limit
```

Platform Notes

```
ScaleMP
    vSMP Foundation: 3.5.284, released Sep. 13, 2011
    See http://www.scalemp.com
```

Continued on next page

Platform Notes (Continued)

```
Hardware Details:
   System was aggregated using 8 X SuperMicro AS-2122TG-HIBQRF servers.
   The servers were connected with Melanox InfiniBand QDR and a
   QDR switch.
```

General Notes

```
The x86 Open64 Compiler Suite is only available from (and supported by) AMD at
http://developer.amd.com/cpu/open64
Binaries were compiled on RHEL5.5 with binutils 2.18
```

Base Compiler Invocation

C benchmarks:
    opencc

C++ benchmarks:
    openCC

Fortran benchmarks:
    openf95

Benchmarks using both Fortran and C:
    opencc openf95

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 -fno-second-underscore
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 -fno-second-underscore
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
`-march=barcelona -mso -Ofast -OPT:malloc_alg=1`

C++ benchmarks:
`-march=barcelona -mso -Ofast -static -INLINE:aggressive=on -OPT:malloc_alg=1`

Fortran benchmarks:
`-march=barcelona -mso -Ofast`

Benchmarks using both Fortran and C:
`-march=barcelona -mso -Ofast -OPT:malloc_alg=1`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/x86-open64-424-flags-rate-revC.20100901.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/x86-open64-424-flags-rate-revC.20100901.xml

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.1.
Report generated on Thu Jul 24 01:07:00 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 14 October 2011.