



SPEC[®] CFP2006 Result

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ScaleMP

SPECfp[®]_rate2006 = Not Run

vSMP Foundation (AMD Opteron 6172, 2.10 GHz)

SPECfp_rate_base2006 = 1990

CPU2006 license: 2929

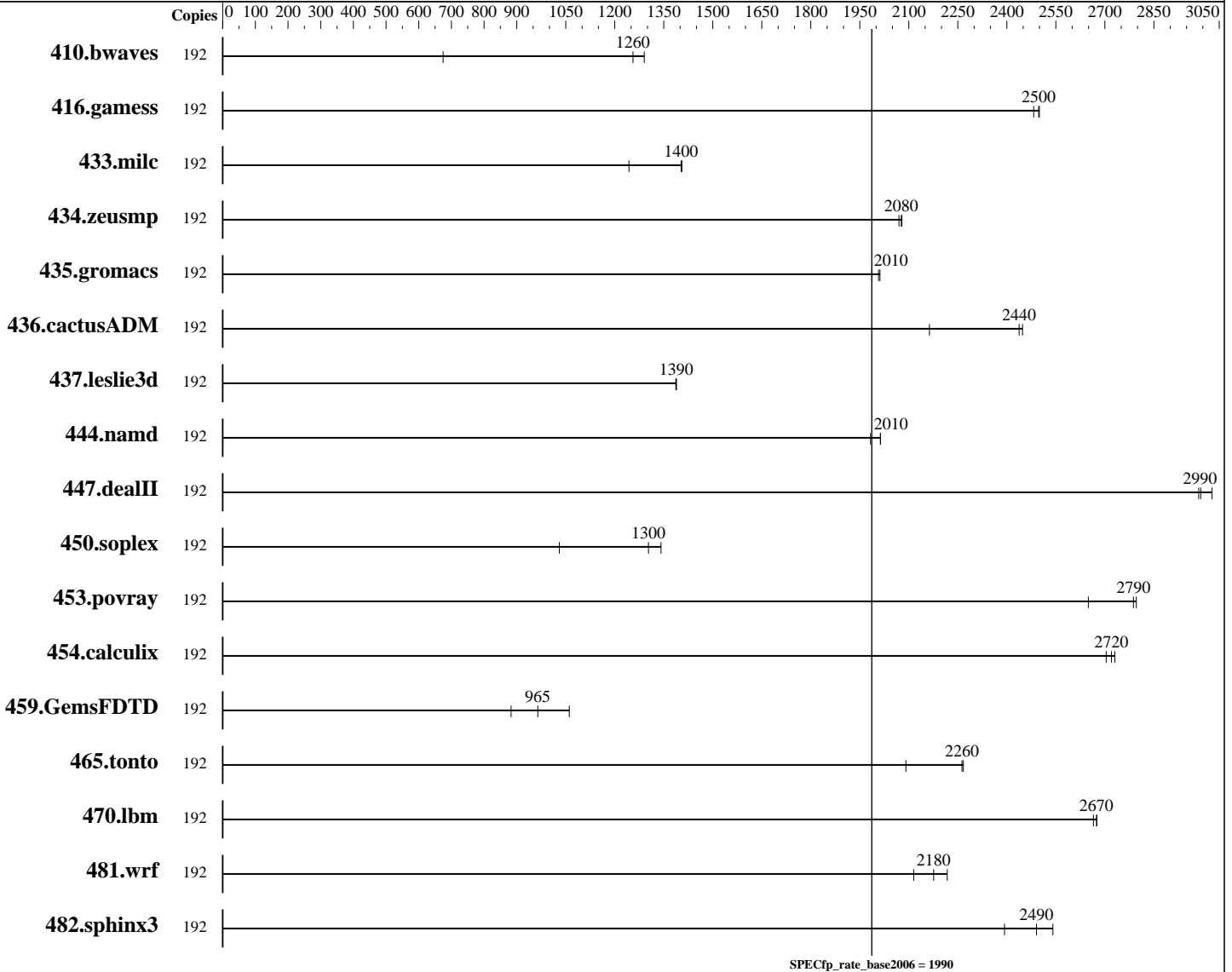
Test sponsor: ScaleMP

Tested by: ScaleMP

Test date: Sep-2011

Hardware Availability: Aug-2010

Software Availability: Sep-2011



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

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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

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

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Platform Notes (Continued)

Hardware Details:

System was aggregated using 8 X SuperMicro AS-2122TG-HIBQRF servers.
The servers were connected with Mellanox 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:

openc

C++ benchmarks:

openCC

Fortran benchmarks:

openf95

Benchmarks using both Fortran and C:

openc 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



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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>

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

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