SPEC® CFP2006 Result

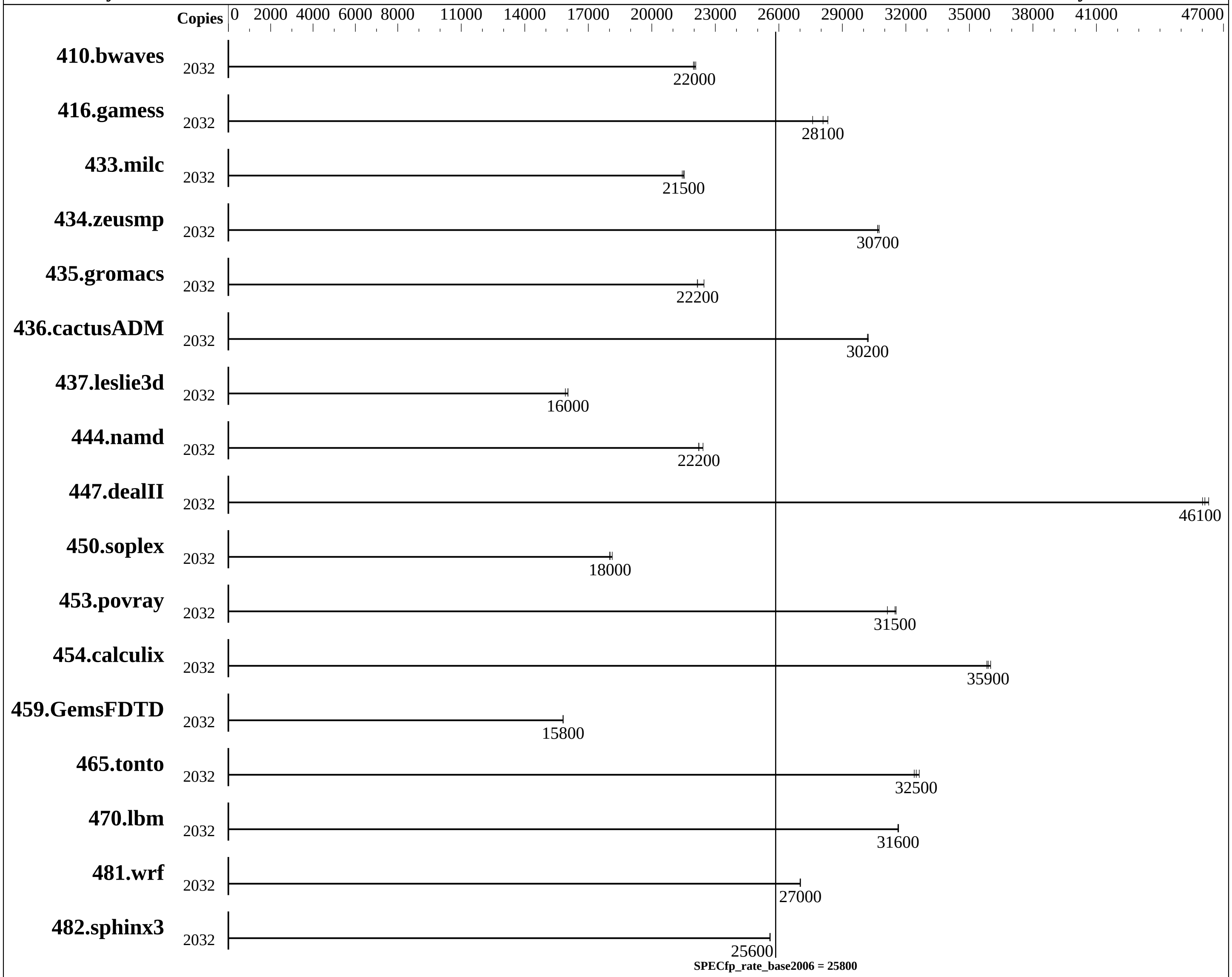
SGI

SGI UV 2000 (Intel Xeon E5-4650, 2.7 GHz)

SPECfp®_rate2006 = Not Run

SPECfp_rate_base2006 = 25800

CPU2006 license:	4	**Test date:**	Sep-2012
Test sponsor:	SGI	**Hardware Availability:**	Jun-2012
Tested by:	SGI	**Software Availability:**	Jul-2012



Hardware

CPU Name:	Intel Xeon E5-4650
CPU Characteristics:	Intel Turbo Boost Technology disabled
CPU MHz:	2700
FPU:	Integrated
CPU(s) enabled:	1024 cores, 128 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable:	4-256 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core

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Software

Operating System:	SUSE Linux Enterprise Server 11 (x86_64) SP2, Kernel 3.0.38-0.5-default
Compiler:	C/C++: Version 12.1.3.293 of Intel C++ Studio XE for Linux; Fortran: Version 12.1.3.293 of Intel Fortran Studio XE for Linux
Auto Parallel:	No
File System:	tmpfs
System State:	Run Level 3 (multi-user)

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L3 Cache: 20 MB I+D on chip per chip
Other Cache: None
Memory: 8 TB (1024 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 8 TB tmpfs
Other Hardware: NUMAlink6 routers

Base Pointers: 32/64-bit
Peak Pointers: Not Applicable
Other Software: SGI Accelerate 1.4, Patch 10920
SGI Foundation Software 2.6, Patch 10931

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2032	1251	22100	**1254**	**22000**	1257	22000							
416.gamess	2032	1405	28300	**1417**	**28100**	1442	27600							
433.milc	2032	**867**	**21500**	866	21500	870	21400							
434.zeusmp	2032	602	30700	**603**	**30700**	603	30700							
435.gromacs	2032	646	22500	655	22200	**655**	**22200**							
436.cactusADM	2032	804	30200	803	30200	**804**	**30200**							
437.leslie3d	2032	1191	16000	1200	15900	**1191**	**16000**							
444.namd	2032	727	22400	734	22200	**733**	**22200**							
447.dealII	2032	**504**	**46100**	505	46000	502	46300							
450.soplex	2032	935	18100	941	18000	**940**	**18000**							
453.povray	2032	347	31100	**343**	**31500**	343	31500							
454.calculix	2032	468	35800	**467**	**35900**	466	36000							
459.GemsFDTD	2032	1363	15800	1364	15800	**1363**	**15800**							
465.tonto	2032	617	32400	**615**	**32500**	613	32600							
470.lbm	2032	882	31700	**883**	**31600**	883	31600							
481.wrf	2032	**840**	**27000**	841	27000	840	27000							
482.sphinx3	2032	**1548**	**25600**	1547	25600	1549	25600							

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

Submit Notes

```
The dplace mechanism was used to bind copies to processors. The config file option 'submit'
was used to generate dplace commands to bind each copy to a specific processor.
Benchmark copies were launched in a staggered fashion to minimize kernel contention
associated with synchronized launches.
For details, please see the config file.
```

Operating System Notes

```
Tmpfs filesystem set up with:
  mount -t tmpfs -o size=8192g,rw tmpfs /mnt/shm/
Stack size set to unlimited using "ulimit -s unlimited"
sysctl vm.stat_interval=10
```

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Platform Notes

```
SGI BIOS version 3.0.7
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/mnt/shm/cpu2006-1.2/libs/32:/mnt/shm/cpu2006-1.2/libs/64"

 Binaries compiled on a system with 2x Xeon E5540 CPU + 32GB
 memory using SLES11 SP1
 Transparent Huge Pages disabled with:
 echo never  > /sys/kernel/mm/transparent_hugepage/enabled
 Filesystem page cache cleared with:
 echo 1 > /proc/sys/vm/drop_caches
```

Base Compiler Invocation

C benchmarks:
`icc   -m64`

C++ benchmarks:
`icpc  -m64`

Fortran benchmarks:
`ifort -m64`

Benchmarks using both Fortran and C:
`icc   -m64 ifort -m64`

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

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Base Portability Flags (Continued)

482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias
-opt-mem-layout-trans=3

C++ benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias
-opt-mem-layout-trans=3

Fortran benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch

Benchmarks using both Fortran and C:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias
-opt-mem-layout-trans=3

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120912.html
http://www.spec.org/cpu2006/flags/SGI-platform.20121009.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120912.xml
http://www.spec.org/cpu2006/flags/SGI-platform.20121009.xml

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

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