SPEC® CFP2006 Result

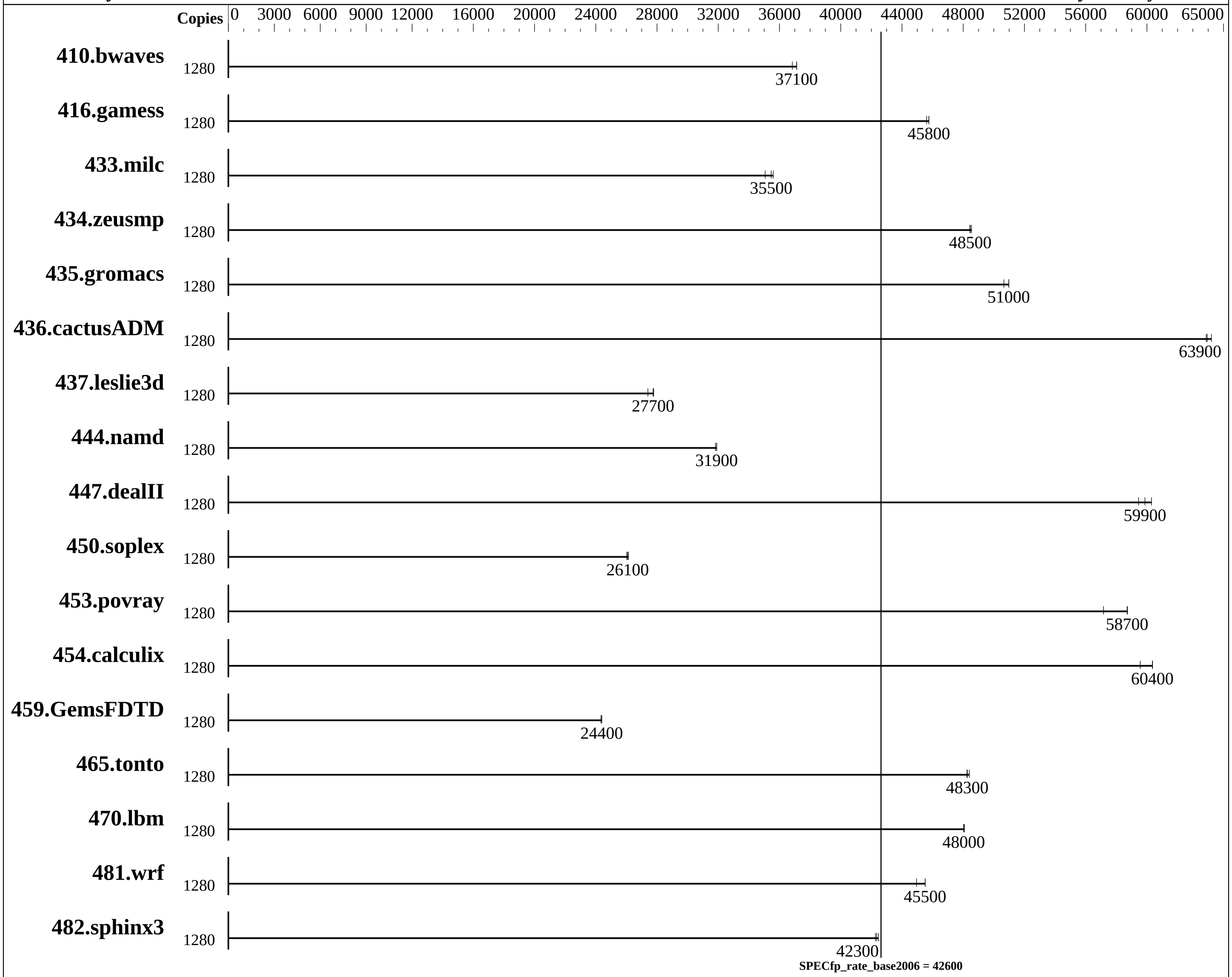
SGI

SGI UV 3000 (Intel Xeon E5-4627 v3, 2.60 GHz)

SPECfp®_rate2006 = Not Run

SPECfp_rate_base2006 = 42600

CPU2006 license:	4	**Test date:**	Mar-2016
Test sponsor:	SGI	**Hardware Availability:**	Aug-2015
Tested by:	SGI	**Software Availability:**	May-2016



Hardware

CPU Name:	Intel Xeon E5-4627 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	1280 cores, 128 chips, 10 cores/chip
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 12 (x86_64) SP1, Kernel 3.12.53-60.30-default
Compiler:	C/C++: Version 16.0.2.181 of Intel C++ Studio XE for Linux; Fortran: Version 16.0.2.181 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:	25 MB I+D on chip per chip
Other Cache:	None
Memory:	16 TB (1024 x 16 GB 2Rx4 PC4-2133P-R)
Disk Subsystem:	16 TB tmpfs
Other Hardware:	NUMAlink6 routers

Base Pointers:	32/64-bit
Peak Pointers:	Not Applicable
Other Software:	SGI Foundation Software 2.14, Build 714a123.sles12sp1-1603011900 SGI Accelerate 1.12, Build 714a123.sles12sp1-1603011900

Results Table

	Base							Peak						
Benchmark	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	1280	469	37100	472	36800	**469**	**37100**							
416.gamess	1280	548	45800	549	45600	**548**	**45800**							
433.milc	1280	**331**	**35500**	335	35100	330	35600							
434.zeusmp	1280	240	48400	**240**	**48500**	240	48500							
435.gromacs	1280	179	51000	180	50700	**179**	**51000**							
436.cactusADM	1280	238	64200	**239**	**63900**	239	63900							
437.leslie3d	1280	439	27400	**434**	**27700**	433	27800							
444.namd	1280	323	31800	322	31900	**322**	**31900**							
447.dealII	1280	243	60300	**245**	**59900**	246	59500							
450.soplex	1280	**409**	**26100**	409	26100	410	26000							
453.povray	1280	116	58700	119	57200	**116**	**58700**							
454.calculix	1280	**175**	**60400**	175	60400	177	59600							
459.GemsFDTD	1280	557	24400	**557**	**24400**	558	24300							
465.tonto	1280	261	48200	**261**	**48300**	260	48400							
470.lbm	1280	366	48000	**366**	**48000**	366	48100							
481.wrf	1280	314	45500	**314**	**45500**	318	45000							
482.sphinx3	1280	588	42500	**589**	**42300**	590	42300							

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

```
Stack size set to unlimited using "ulimit -s unlimited"

The tmpfs filesystem was set up with:
  mkdir -p /mnt/shm/cpu2006-sgi-ic16
  mount -t tmpfs -o size=16384g,rw tmpfs /mnt/shm/cpu2006-sgi-ic16
```

Platform Notes

```
The dmidecode output is in error - the memory was running at 2133.
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/mnt/shm/cpu2006-sgi-ic16/libs/32:/mnt/shm/cpu2006-sgi-ic16/libs/64:/mnt/shm/cpu2006-sgi-ic16/sh"

 Transparent Huge Pages enabled with:
 echo always > /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
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3
```

C++ benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3
```

Fortran benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
```

Benchmarks using both Fortran and C:

```
-xCORE-AVX2 -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/SGI-UV3000-Platform-Flags.html
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/SGI-UV3000-Platform-Flags.xml
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml

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

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