SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

SGI

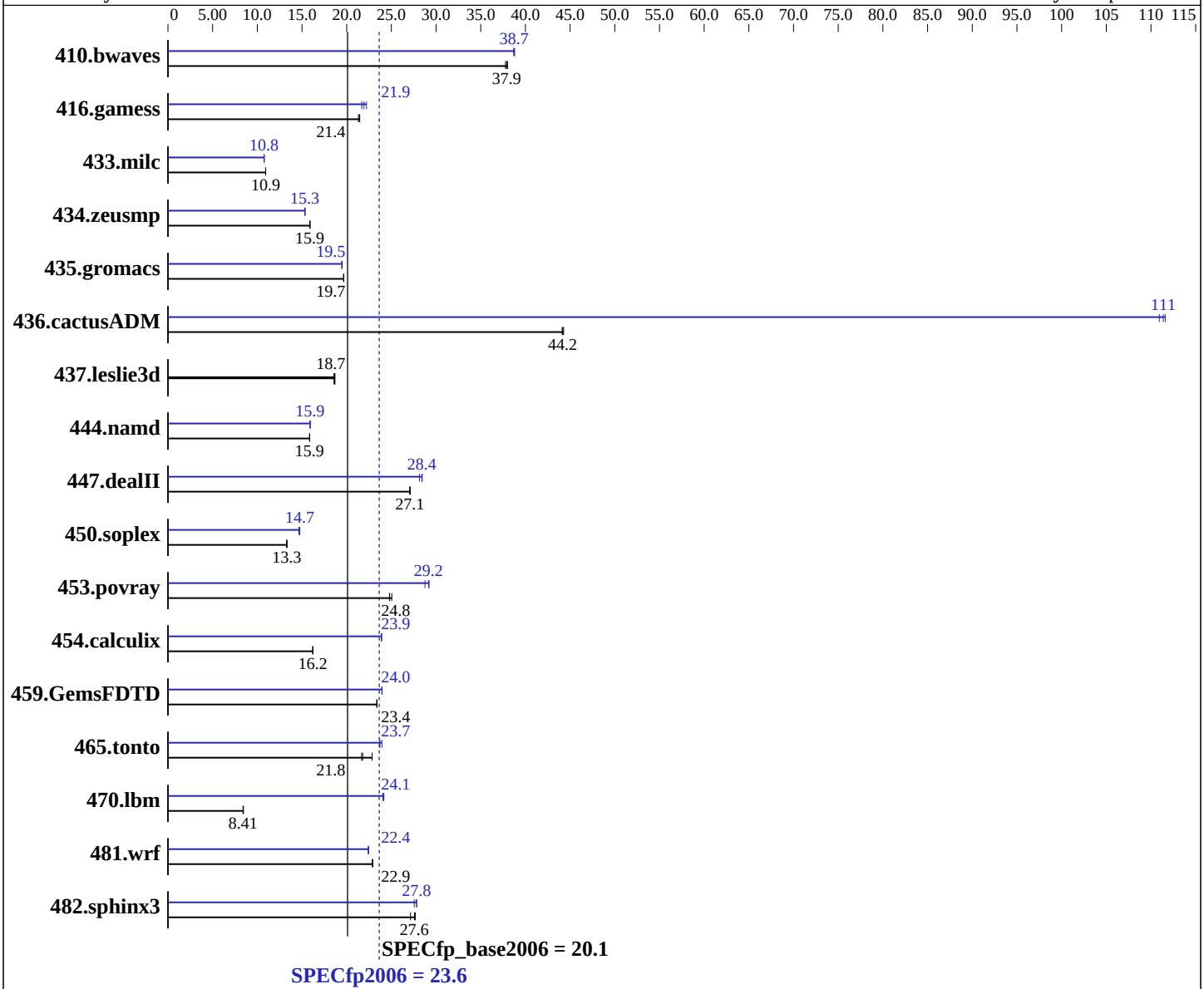
SGI Altix ICE 8200EX (Intel Xeon E5472, 3.00 GHz)

SPECfp®2006 = 23.6

SPECfp_base2006 = 20.1

CPU2006 license: 4
Test sponsor: SGI
Tested by: SGI

Test date: May-2008
Hardware Availability: Mar-2008
Software Availability: Apr-2008



Hardware

CPU Name:	Intel Xeon E5472
CPU Characteristics:	Quad Core, 3.0 GHz
CPU MHz:	2992
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:	12 MB I+D on chip per chip, 6 MB shared / 2 cores

Continued on next page

Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP1 2.6.16.46-0.12-smp
Compiler:	Intel C++ and Fortran Compiler for Linux Version 10.1, Build 20070913
Auto Parallel:	Yes
File System:	NFSv3 IPoIB
System State:	Multi-user, run level 3
Base Pointers:	64-bit
Peak Pointers:	32/64-bit

Continued on next page

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

SGI

SGI Altix ICE 8200EX (Intel Xeon E5472, 3.00 GHz)

SPECfp2006 = 23.6

SPECfp_base2006 = 20.1

CPU2006 license: 4
Test sponsor: SGI
Tested by: SGI

Test date: May-2008
Hardware Availability: Mar-2008
Software Availability: Apr-2008

L3 Cache: None
Other Cache: None
Memory: 16 GB (8*2GB PC2-6400 CL5-5-5 FB-DIMMs)
Disk Subsystem: 16 TB RAID 6+1
32 x 500 GB SATA (Seagate Barracuda 7200 rpm)
Other Hardware: None

Other Software: SGI ProPack 5 for Linux Service Pack 5
Binutils 2.17

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	360	37.8	**359**	**37.9**	358	38.0	**351**	**38.7**	350	38.8	351	38.7
416.gamess	912	21.5	**913**	**21.4**	919	21.3	**893**	**21.9**	903	21.7	881	22.2
433.milc	839	10.9	840	10.9	**840**	**10.9**	853	10.8	**853**	**10.8**	852	10.8
434.zeusmp	573	15.9	572	15.9	**573**	**15.9**	**594**	**15.3**	594	15.3	593	15.3
435.gromacs	**363**	**19.7**	363	19.7	363	19.7	**367**	**19.5**	366	19.5	367	19.4
436.cactusADM	271	44.1	270	44.3	**271**	**44.2**	107	112	108	111	**107**	**111**
437.leslie3d	**504**	**18.7**	503	18.7	506	18.6	**504**	**18.7**	503	18.7	506	18.6
444.namd	506	15.8	**506**	**15.9**	506	15.9	504	15.9	504	15.9	**504**	**15.9**
447.dealII	423	27.1	422	27.1	**422**	**27.1**	406	28.2	402	28.5	**403**	**28.4**
450.soplex	626	13.3	628	13.3	**627**	**13.3**	569	14.7	**565**	**14.7**	565	14.8
453.povray	212	25.0	215	24.8	**214**	**24.8**	185	28.8	182	29.2	**182**	**29.2**
454.calculix	509	16.2	**509**	**16.2**	509	16.2	345	23.9	**345**	**23.9**	345	23.9
459.GemsFDTD	454	23.4	**454**	**23.4**	454	23.4	443	24.0	**443**	**24.0**	443	23.9
465.tonto	431	22.8	**452**	**21.8**	454	21.7	411	23.9	416	23.7	**415**	**23.7**
470.lbm	1626	8.45	1635	8.40	**1633**	**8.41**	**570**	**24.1**	569	24.2	572	24.0
481.wrf	487	22.9	**487**	**22.9**	489	22.9	**498**	**22.4**	497	22.5	498	22.4
482.sphinx3	704	27.7	718	27.1	**707**	**27.6**	700	27.8	707	27.6	**701**	**27.8**

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

General Notes

```
BIOS settings:
  Snoop Filter:             Enabled
  Hardware Prefetcher:      Enabled
  Adjacent Sector Prefetch: Disabled
All benchmarks compiled in 64-bit mode except 450.soplex,
470.lbm and 482.sphinx3, at peak, are compiled in 32-bit mode
Benchmarks compiled with automatic parallelization use
the following environment settings:
  OMP_NUM_THREADS = 8
  KMP_AFFINITY = physical,0
  KMP_STACKSIZE = 200M
```

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

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:
-fast -parallel

C++ benchmarks:
-fast -parallel

Fortran benchmarks:
-fast -parallel

Benchmarks using both Fortran and C:
-fast -parallel

Peak Compiler Invocation

C benchmarks (except as noted below):
```
/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/include
```

433.milc: `icc`

C++ benchmarks (except as noted below):
```
icpc
```

450.soplex: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/bin/icpc -L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/lib -I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux32/include`

Fortran benchmarks:
```
ifort
```

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

Peak 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`
453.povray: `-DSPEC_CPU_LP64`
454.calculix: `-DSPEC_CPU_LP64 -nofor_main`
459.GemsFDTD: `-DSPEC_CPU_LP64`
465.tonto: `-DSPEC_CPU_LP64`
481.wrf: `-DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

433.milc: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -fno-alias -auto-ilp32`

470.lbm: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -scalar-rep- -prefetch -opt-malloc-options=3`

Continued on next page

Peak Optimization Flags (Continued)

482.sphinx3: `-fast -unroll2`

C++ benchmarks:

444.namd: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -fno-alias -auto-ilp32`

447.dealII: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -ansi-alias -scalar-rep-`

450.soplex: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -opt-malloc-options=3`

453.povray: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll4 -ansi-alias`

Fortran benchmarks:

410.bwaves: `-fast -prefetch -parallel`

416.gamess: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -Ob0 -ansi-alias -scalar-rep-`

434.zeusmp: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast`

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -Ob0 -prefetch -parallel`

465.tonto: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll4 -auto`

Benchmarks using both Fortran and C:

435.gromacs: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -prefetch -auto-ilp32`

436.cactusADM: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -prefetch -parallel -auto-ilp32`

454.calculix: `-fast -unroll-aggressive -auto-ilp32`

481.wrf: `-fast -parallel -prefetch -auto-ilp32`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.04.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.04.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 v1.0.
Report generated on Tue Jul 22 17:31:57 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 11 June 2008.