



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp®2006 = 45.4

Sun Ultra 27 (Intel Xeon W3570 3.2GHz)

SPECfp_base2006 = 41.3

CPU2006 license: 6

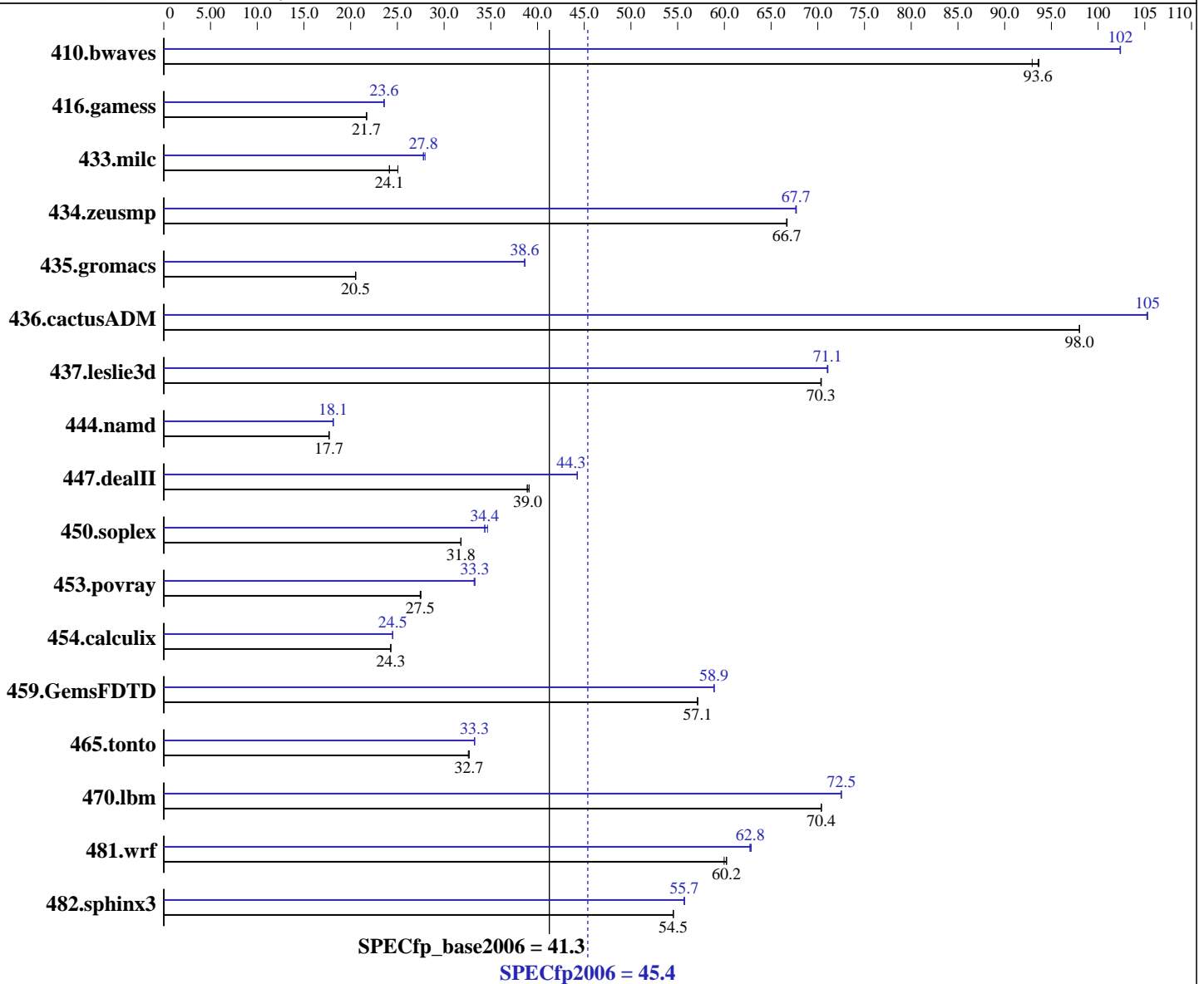
Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Apr-2009

Hardware Availability: Apr-2009

Software Availability: Jun-2009



Hardware

CPU Name: Intel Xeon W3570
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz
 CPU MHz: 3200
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core

Continued on next page

Software

Operating System: OpenSolaris 2008.11
 Compiler: Sun Studio 12 Update 1 (internal build 39.0)
 Auto Parallel: Yes
 File System: zfs
 System State: Default
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp2006 = **45.4**

Sun Ultra 27 (Intel Xeon W3570 3.2GHz)

SPECfp_base2006 = **41.3**

CPU2006 license: 6

Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Apr-2009

Hardware Availability: Apr-2009

Software Availability: Jun-2009

L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 6 GB (3 x 2 GB DDR3-1333)
Disk Subsystem: 500 GB, SATA, 7200 RPM
Other Hardware: None

Other Software: MicroQuill SmartHeap Library 9.01 for x64
Apache C++ Standard Library V4.2.1

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	146	92.9	145	93.6	145	93.7	133	102	133	102	133	102
416.gamess	903	21.7	903	21.7	902	21.7	831	23.6	830	23.6	830	23.6
433.milc	366	25.1	380	24.1	380	24.1	330	27.8	330	27.8	328	28.0
434.zeusmp	136	66.7	137	66.6	136	66.7	134	67.7	135	67.6	134	67.7
435.gromacs	348	20.5	348	20.5	348	20.5	185	38.7	185	38.6	185	38.6
436.cactusADM	122	98.0	122	98.0	122	98.0	113	105	113	105	114	105
437.leslie3d	134	70.4	134	70.3	134	70.3	132	71.1	132	71.1	132	71.0
444.namd	453	17.7	453	17.7	453	17.7	443	18.1	442	18.1	442	18.2
447.dealII	293	39.1	294	38.9	294	39.0	258	44.3	259	44.2	258	44.3
450.soplex	262	31.8	262	31.8	262	31.8	241	34.6	243	34.4	243	34.3
453.povray	193	27.5	194	27.5	194	27.4	160	33.2	160	33.3	160	33.3
454.calculix	340	24.3	340	24.3	340	24.3	337	24.5	337	24.5	337	24.5
459.GemsFDTD	186	57.1	186	57.1	186	57.1	180	58.9	180	58.9	180	58.9
465.tonto	302	32.6	301	32.7	301	32.7	296	33.3	296	33.3	296	33.2
470.lbm	195	70.4	195	70.4	195	70.4	190	72.5	189	72.5	189	72.5
481.wrf	185	60.2	185	60.2	186	60.0	178	62.9	178	62.7	178	62.8
482.sphinx3	358	54.5	357	54.5	357	54.6	350	55.7	350	55.7	350	55.7

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

Compiler Invocation Notes

The Apache C++ Standard Library V4.2.1 was installed from <http://stdcxx.apache.org/download.html> using:
alias gmake=specmake
gmake BUILDTYPE=8D CONFIG=sunpro.config

Operating System Notes

```
ulimit -s 131072 (shell): increases stack
/etc/system parameters
tune_t_fsflushr=10
autoup=900
set lpg_alloc_prefer=1
```



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp2006 = 45.4

Sun Ultra 27 (Intel Xeon W3570 3.2GHz)

SPECfp_base2006 = 41.3

CPU2006 license: 6

Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Apr-2009

Hardware Availability: Apr-2009

Software Availability: Jun-2009

Platform Notes

Default BIOS settings used except:
Intel VT-d: Disabled. VT-d, if enabled, supports remapping of I/O DMA transfers for virtualization.

General Notes

Environment variables set by runspec before the start of the run:

OMP_NUM_THREADS = "4"

SUNW_MP_PROCBIND = "true"

SUNW_MP_THR_IDLE = "SPIN"

447.dealII (peak): "apache_stdclxx_4_2_1" src.alt was used.

447.dealII (base): "apache_stdclxx_4_2_1" src.alt was used.

Base Compiler Invocation

C benchmarks:

/data1/SUNWspro.b39/SUNWspro/bin/cc

C++ benchmarks:

/data1/SUNWspro.b39/SUNWspro/bin/CC

Fortran benchmarks:

/data1/SUNWspro.b39/SUNWspro/bin/f90

Benchmarks using both Fortran and C:

/data1/SUNWspro.b39/SUNWspro/bin/cc /data1/SUNWspro.b39/SUNWspro/bin/f90

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
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_WORDS_LITTLEENDIAN
482.sphinx3: -DSPEC_CPU_LP64



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp2006 = 45.4

Sun Ultra 27 (Intel Xeon W3570 3.2GHz)

SPECfp_base2006 = 41.3

CPU2006 license: 6

Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Apr-2009

Hardware Availability: Apr-2009

Software Availability: Jun-2009

Base Optimization Flags

C benchmarks:

-fast -xipo=2 -m64 -xvector=simd -xautopar

C++ benchmarks:

-fast -xipo=2 -m64 -xvector=simd -library=no%Cstd
-I/data1/stdcxx-4.2.1/include -I/data1/stdcxx-4.2.1/build/include
-L/data1/stdcxx-4.2.1/build/lib -R/data1/stdcxx-4.2.1/build/lib -lstd8D

Fortran benchmarks:

-fast -xipo=2 -m64 -xvector=simd -xautopar

Benchmarks using both Fortran and C:

-fast(cc) -xipo=2 -m64 -xvector=simd -xautopar -fast(f90)

Base Other Flags

C benchmarks:

-V -# -xjobs=16

C++ benchmarks:

-verbose=diags,version -xjobs=16

Fortran benchmarks:

-V -v -xjobs=16

Benchmarks using both Fortran and C:

-V -# -xjobs=16 -v

Peak Compiler Invocation

C benchmarks:

/data1/SUNWspro.b39/SUNWspro/bin/cc

C++ benchmarks:

/data1/SUNWspro.b39/SUNWspro/bin/CC

Fortran benchmarks:

/data1/SUNWspro.b39/SUNWspro/bin/f90

Benchmarks using both Fortran and C:

/data1/SUNWspro.b39/SUNWspro/bin/cc /data1/SUNWspro.b39/SUNWspro/bin/f90



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp2006 = 45.4

Sun Ultra 27 (Intel Xeon W3570 3.2GHz)

SPECfp_base2006 = 41.3

CPU2006 license: 6

Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Apr-2009

Hardware Availability: Apr-2009

Software Availability: Jun-2009

Peak Portability Flags

436.cactusADM: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_WORDS_LITTLEENDIAN

Peak Optimization Flags

C benchmarks:

433.milc: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=2M

470.lbm: -fast -xipo=2 -m64 -xvector=simd -xautopar -xreduction
-L/data1/SmartHeap_9/lib -R/data1/SmartHeap_9/lib -lsmarheap_mt64
-lmvec

482.sphinx3: -fast -xipo=2 -m64 -xpagesize=2M -xvector=simd
-xprefetch=no%auto -xautopar -xreduction

C++ benchmarks:

444.namd: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xpagesize=2M -xunroll=8 -library=stlport4

447.deallI: -fast -xipo=1 -m64 -xpagesize=2M -xalias_level=compatible
-xdepend -library=no%Cstd -I/data1/stdcxx-4.2.1/include
-I/data1/stdcxx-4.2.1/build/include
-L/data1/stdcxx-4.2.1/build/lib
-R/data1/stdcxx-4.2.1/build/lib -lstd8D

450.soplex: -fast -xipo=2 -xpagesize=2M -xrestrict
-xalias_level=simple -xprefetch=no%auto -xdepend
-library=stlport4

453.povray: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xpagesize=2M -xalias_level=compatible -library=stlport4

Fortran benchmarks:

410.bwaves: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xpagesize=2M -xprefetch=no%auto -xautopar -xreduction

416.gamess: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xpagesize=2M -xunroll=1 -qoption iropt -Ainline:cp=19
-qoption iropt -Ainline:rs=50 -qoption iropt -Ainline:irs=30

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp2006 = 45.4

Sun Ultra 27 (Intel Xeon W3570 3.2GHz)

SPECfp_base2006 = 41.3

CPU2006 license: 6

Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Apr-2009

Hardware Availability: Apr-2009

Software Availability: Jun-2009

Peak Optimization Flags (Continued)

434.zeusmp: -fast -xipo=2 -m64 -xvector=simd -xautopar -xreduction

437.leslie3d: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xvector=simd -xautopar -xreduction -lumem

459.GemsFDTD: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xpagesize=2M -xvector=simd -xautopar -xreduction

465.tonto: -fast -xipo=2 -m64 -xpagesize=2M -xautopar -stackvar
-xreduction -xprefetch=no%auto -xvector=lib -xalias
-xdepend

Benchmarks using both Fortran and C:

435.gromacs: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast(cc) -fast(f90)
-xipo=2 -m64 -xpagesize=2M -fsimple=2
-Qoption ube -fsimple=3 -xprefetch=no%auto -xautopar
-xreduction

436.cactusADM: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast(cc) -fast(f90)
-xipo=2 -m64 -xvector=simd -xautopar
-W2,-Aparallel:nthreads=16
-Qoption iropt -Aparallel:nthreads=16

454.calculix: -fast(cc) -fast(f90) -xipo=2 -m64 -xpagesize=2M
-xvector=simd

481.wrf: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast(cc) -fast(f90)
-xipo=2 -m64 -xpagesize=2M -xvector=lib,simd
-xprefetch=no%auto -xautopar -xreduction

Peak Other Flags

C benchmarks:
-V -# -xjobs=16

C++ benchmarks:
-verbose=diags,version -xjobs=16

Fortran benchmarks:
-V -v -xjobs=16

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp2006 = 45.4

Sun Ultra 27 (Intel Xeon W3570 3.2GHz)

SPECfp_base2006 = 41.3

CPU2006 license: 6

Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Apr-2009

Hardware Availability: Apr-2009

Software Availability: Jun-2009

Peak Other Flags (Continued)

Benchmarks using both Fortran and C:
-V -# -xjobs=16 -v

The flags file that was used to format this result can be browsed at

http://www.spec.org/cpu2006/flags/Sun-OpenSolaris-Studio-x86_64.20090710.00.html

You can also download the XML flags source by saving the following link:

http://www.spec.org/cpu2006/flags/Sun-OpenSolaris-Studio-x86_64.20090710.00.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 Wed Jul 23 02:02:07 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 28 April 2009.