



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems Sun Fire X2100

SPECfp[®]2006 = 12.4

SPECfp_base2006 = 11.6

CPU2006 license: 6

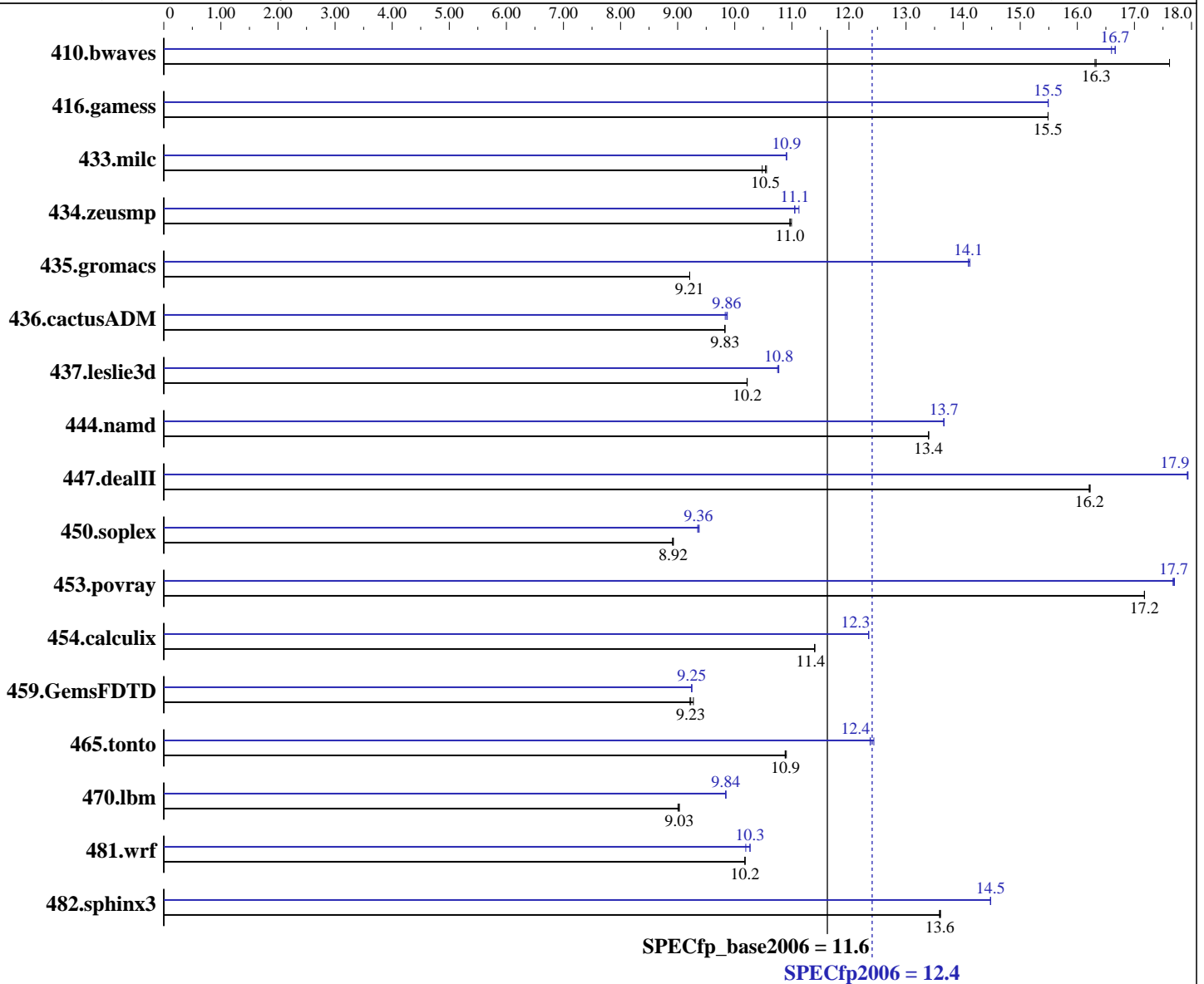
Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Apr-2006

Hardware Availability: May-2006

Software Availability: Jul-2006



Hardware

CPU Name: AMD Opteron 156
 CPU Characteristics:
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip
 CPU(s) orderable: 1 chip
 Primary Cache: 64 KB I + 64 KB D on chip per chip
 Secondary Cache: 1 MB I+D on chip per chip

Continued on next page

Software

Operating System: Solaris 10 1/06
 Compiler: Sun Studio 11 with patch 120759-06
 Auto Parallel: No
 File System: ufs
 System State: Default
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other Software: None



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire X2100

SPECfp2006 = 12.4
SPECfp_base2006 = 11.6

CPU2006 license: 6
Test sponsor: Sun Microsystems
Tested by: Sun Microsystems

Test date: Apr-2006
Hardware Availability: May-2006
Software Availability: Jul-2006

L3 Cache: None
Other Cache: None
Memory: 4 GB (4x1 GB, PC3200 CL3 ECC)
Disk Subsystem: SATA,80GB,10K RPM
Other Hardware: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	772	17.6	<u>832</u>	<u>16.3</u>	833	16.3	819	16.6	816	16.7	<u>816</u>	<u>16.7</u>
416.gamess	1264	15.5	1264	15.5	<u>1264</u>	<u>15.5</u>	<u>1264</u>	<u>15.5</u>	1264	15.5	1264	15.5
433.milc	876	10.5	<u>871</u>	<u>10.5</u>	870	10.6	842	10.9	842	10.9	<u>842</u>	<u>10.9</u>
434.zeusmp	830	11.0	<u>830</u>	<u>11.0</u>	828	11.0	818	11.1	824	11.0	<u>823</u>	<u>11.1</u>
435.gromacs	775	9.21	<u>775</u>	<u>9.21</u>	775	9.21	<u>507</u>	<u>14.1</u>	507	14.1	506	14.1
436.cactusADM	1216	9.83	1216	9.82	<u>1216</u>	<u>9.83</u>	1215	9.83	<u>1212</u>	<u>9.86</u>	1211	9.87
437.leslie3d	920	10.2	920	10.2	<u>920</u>	<u>10.2</u>	874	10.8	873	10.8	<u>873</u>	<u>10.8</u>
444.namd	599	13.4	<u>599</u>	<u>13.4</u>	599	13.4	587	13.7	<u>587</u>	<u>13.7</u>	587	13.7
447.dealII	705	16.2	706	16.2	<u>706</u>	<u>16.2</u>	638	17.9	<u>638</u>	<u>17.9</u>	638	17.9
450.soplex	936	8.91	<u>935</u>	<u>8.92</u>	934	8.93	889	9.38	<u>891</u>	<u>9.36</u>	892	9.35
453.povray	310	17.2	310	17.2	<u>310</u>	<u>17.2</u>	301	17.7	301	17.7	<u>301</u>	<u>17.7</u>
454.calculix	<u>724</u>	<u>11.4</u>	724	11.4	724	11.4	668	12.3	668	12.3	<u>668</u>	<u>12.3</u>
459.GemsFDTD	1144	9.28	<u>1150</u>	<u>9.23</u>	1151	9.22	1148	9.25	<u>1148</u>	<u>9.25</u>	1148	9.25
465.tonto	902	10.9	<u>904</u>	<u>10.9</u>	904	10.9	791	12.4	795	12.4	<u>795</u>	<u>12.4</u>
470.lbm	1526	9.01	1522	9.03	<u>1522</u>	<u>9.03</u>	1396	9.84	<u>1396</u>	<u>9.84</u>	1396	9.84
481.wrf	1097	10.2	<u>1097</u>	<u>10.2</u>	1097	10.2	1096	10.2	1088	10.3	<u>1088</u>	<u>10.3</u>
482.sphinx3	<u>1434</u>	<u>13.6</u>	1435	13.6	1433	13.6	1346	14.5	1346	14.5	<u>1346</u>	<u>14.5</u>

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

Operating System Notes

```
ulimit -s 131072 (shell): increases stack
```

```
/etc/system parameters
```

```
tune_t_fsflushr=1
```

```
Controls how many seconds elapse between runs of the  
page flush daemon, fsflush.
```

```
autoup=900
```

```
Causes pages older than the listed number of seconds to  
be written by fsflush.
```



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire X2100

SPECfp2006 = 12.4
SPECfp_base2006 = 11.6

CPU2006 license: 6
Test sponsor: Sun Microsystems
Tested by: Sun Microsystems

Test date: Apr-2006
Hardware Availability: May-2006
Software Availability: Jul-2006

Platform Notes

Default BIOS settings were used.

Base Compiler Invocation

C benchmarks:
cc

C++ benchmarks:
CC

Fortran benchmarks:
f90

Benchmarks using both Fortran and C:
cc 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

Base Optimization Flags

C benchmarks:
-fast -xipo=2 -xarch=amd64a

C++ benchmarks:
-fast -xipo=2 -xarch=amd64a -library=stlport4

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire X2100

SPECfp2006 = 12.4
SPECfp_base2006 = 11.6

CPU2006 license: 6
Test sponsor: Sun Microsystems
Tested by: Sun Microsystems

Test date: Apr-2006
Hardware Availability: May-2006
Software Availability: Jul-2006

Base Optimization Flags (Continued)

Fortran benchmarks:
-fast -xipo=2 -xarch=amd64a
Benchmarks using both Fortran and C:
-fast(cc) -fast(f90) -xipo=2 -xarch=amd64a

Base Other Flags

C benchmarks:
-V
C++ benchmarks:
-verbose=version
Fortran benchmarks:
-V
Benchmarks using both Fortran and C:
-V

Peak Compiler Invocation

C benchmarks:
cc
C++ benchmarks:
CC
Fortran benchmarks:
f90
Benchmarks using both Fortran and C:
cc f90

Peak Portability Flags

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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire X2100

SPECfp2006 = 12.4
SPECfp_base2006 = 11.6

CPU2006 license: 6
Test sponsor: Sun Microsystems
Tested by: Sun Microsystems

Test date: Apr-2006
Hardware Availability: May-2006
Software Availability: Jul-2006

Peak Optimization Flags

C benchmarks:

433.milc: -fast -xarch=amd64a -xipo=2 -xprefetch=auto
-xprefetch_level=3 -xpagesize=2m
470.lbm: -fast -xarch=amd64a -xpagesize=2m -W2,-Ainline:inc=200
-W2,-Ainline:cs=500 -xprefetch_level=3
482.sphinx3: -fast -xarch=amd64a -xrestrict -xipo=2 -xprefetch=auto
-xpagesize=2m -Wd,-iropt-prof -W2,-Ashort_ldst:ldld
-W2,-Ainline:rs=50 -M /usr/lib/ld/map.bssalign

C++ benchmarks:

444.namd: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xarch=amd64a
-xipo=2 -library=stlport4
447.dealII: -fast -xarch=amd64a -xipo=2 -xvector
-Qoption iropt -Abcopy -xalias_level -xrestrict
-xregs=frameptr -library=stlport4
450.soplex: -fast -xipo=2 -xarch=sse2a -library=stlport4
453.povray: Same as 447.dealII

Fortran benchmarks:

410.bwaves: -fast -xarch=amd64a -unroll=5 -stackvar -xO4 -xipo=2
-xprefetch_level=3 -Qoption iropt -Rloop_dist
416.gamess: -fast -xarch=amd64a -xipo=2 -xprefetch_level=3
434.zeusmp: -fast -xarch=amd64a -xipo=2 -xregs=frameptr
437.leslie3d: -fast -xipo=2 -xarch=sse2a
459.GemsFDTD: -fast -xarch=amd64a -xipo=2 -xprefetch_level=3
-xpagesize=2m
465.tonto: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xarch=amd64a
-xipo=2 -xvector=lib -xalias -xdepend -lbsdmalloc

Benchmarks using both Fortran and C:

435.gromacs: -fast(cc) -fast(f90) -xipo=2 -xarch=amd64a -Wu,-fsimple=3
-Qoption ube -fsimple=3

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire X2100

SPECfp2006 = 12.4
SPECfp_base2006 = 11.6

CPU2006 license: 6
Test sponsor: Sun Microsystems
Tested by: Sun Microsystems

Test date: Apr-2006
Hardware Availability: May-2006
Software Availability: Jul-2006

Peak Optimization Flags (Continued)

436.cactusADM: -fast(cc) -fast(f90) -xipo=2 -xarch=amd64a

454.calculix: -fast(cc) -fast(f90) -xarch=amd64a -xpagesize=2m
-xprefetch=auto -xprefetch_level=3 -W2,-Ainline:inc=200
-W2,-Ainline:cs=500 -unroll=5 -stackvar -xO4 -xipo=2
-Qoption iropt -Rloop_dist

481.wrf: Same as 436.cactusADM

Peak Other Flags

C benchmarks:
-V

C++ benchmarks:
-verbose=version

Fortran benchmarks:
-V

Benchmarks using both Fortran and C:
-V

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

<http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio-Opteron.20090715.02.html>

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

<http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio-Opteron.20090715.02.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 v91.
Report generated on Tue Jul 22 09:58:22 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 24 August 2006.