



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp®_rate2006 = 197

Sun Blade X6270 (Intel Xeon X5570 2.93GHz)

SPECfp_rate_base2006 = 182

CPU2006 license: 6

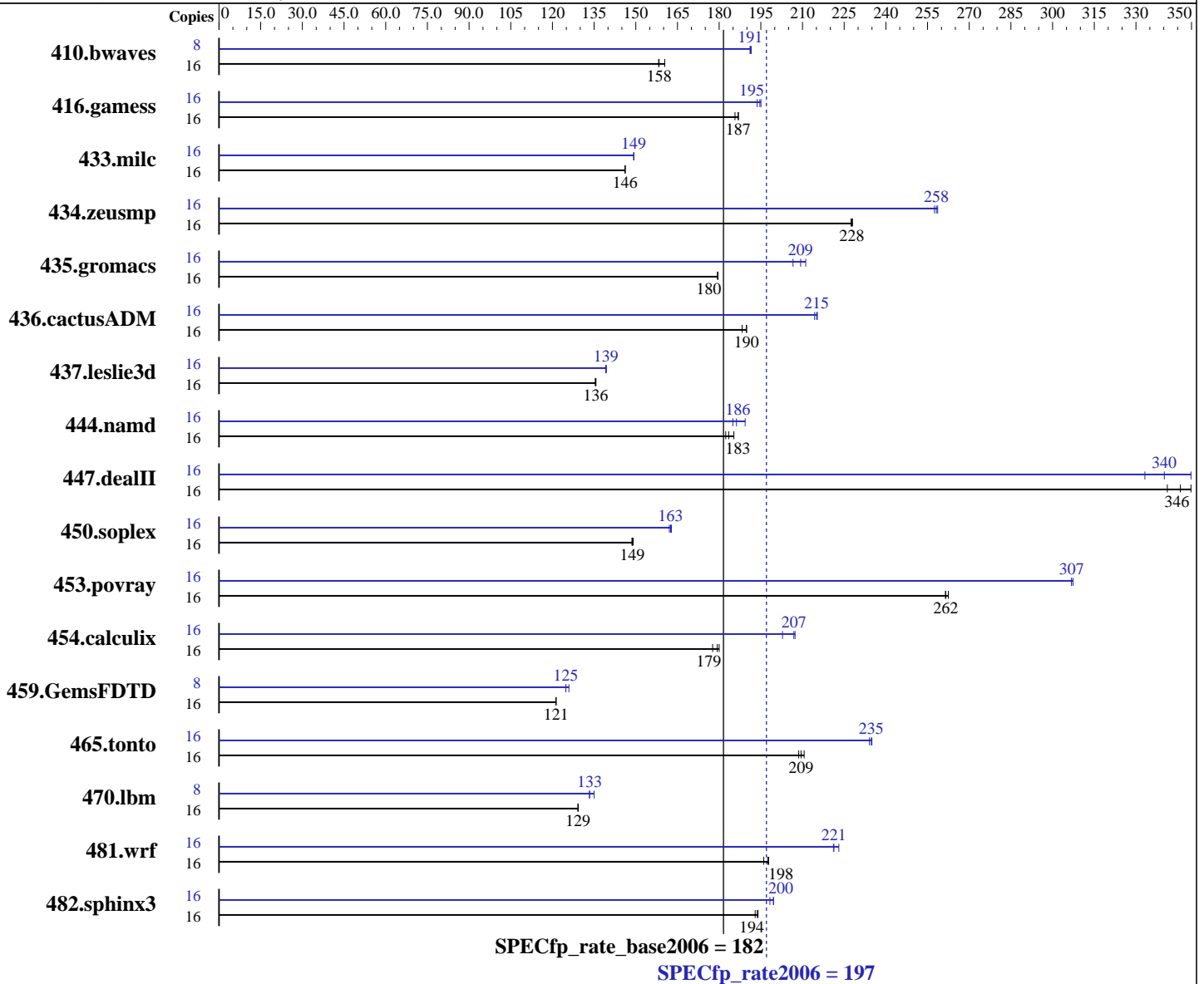
Test date: Mar-2009

Test sponsor: Sun Microsystems

Hardware Availability: Apr-2009

Tested by: Sun Microsystems

Software Availability: Jun-2009



Hardware

CPU Name: Intel Xeon X5570
 CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz
 CPU MHz: 2933
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1 or 2 chips
 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 (nightly build 090328)
 Auto Parallel: No
 File System: zfs with gzip compression
 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

SPECfp_rate2006 = 197

Sun Blade X6270 (Intel Xeon X5570 2.93GHz)

SPECfp_rate_base2006 = 182

CPU2006 license: 6

Test date: Mar-2009

Test sponsor: Sun Microsystems

Hardware Availability: Apr-2009

Tested by: Sun Microsystems

Software Availability: Jun-2009

L3 Cache: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 24 GB (6 x 4 GB DDR3-1333)
 Disk Subsystem: 134 GB using 1x ST914602SSUN146GSAS
 SAS 10 K 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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	16	<u>1373</u>	<u>158</u>	1374	158	1355	160	8	<u>568</u>	<u>191</u>	568	192	569	191
416.gamess	16	1676	187	<u>1677</u>	<u>187</u>	1687	186	16	1606	195	<u>1609</u>	<u>195</u>	1618	194
433.milc	16	1005	146	1005	146	<u>1005</u>	<u>146</u>	16	984	149	984	149	<u>984</u>	<u>149</u>
434.zeusmp	16	<u>639</u>	<u>228</u>	639	228	640	227	16	565	257	<u>564</u>	<u>258</u>	563	259
435.gromacs	16	637	179	636	180	<u>636</u>	<u>180</u>	16	<u>546</u>	<u>209</u>	541	211	553	207
436.cactusADM	16	1016	188	<u>1007</u>	<u>190</u>	1007	190	16	<u>889</u>	<u>215</u>	892	214	888	215
437.leslie3d	16	1111	135	1109	136	<u>1109</u>	<u>136</u>	16	1079	139	<u>1080</u>	<u>139</u>	1081	139
444.namd	16	693	185	<u>700</u>	<u>183</u>	704	182	16	678	189	<u>689</u>	<u>186</u>	694	185
447.dealII	16	<u>529</u>	<u>346</u>	523	350	536	341	16	523	350	<u>538</u>	<u>340</u>	549	333
450.soplex	16	<u>897</u>	<u>149</u>	895	149	898	149	16	823	162	<u>821</u>	<u>163</u>	820	163
453.povray	16	<u>325</u>	<u>262</u>	326	261	324	262	16	<u>277</u>	<u>307</u>	277	307	277	307
454.calculix	16	733	180	<u>736</u>	<u>179</u>	743	178	16	637	207	<u>638</u>	<u>207</u>	651	203
459.GemsFDTD	16	1399	121	<u>1400</u>	<u>121</u>	1400	121	8	680	125	<u>680</u>	<u>125</u>	674	126
465.tonto	16	755	209	748	211	<u>752</u>	<u>209</u>	16	<u>671</u>	<u>235</u>	673	234	670	235
470.lbm	16	1701	129	1701	129	<u>1701</u>	<u>129</u>	8	<u>824</u>	<u>133</u>	814	135	825	133
481.wrf	16	912	196	<u>905</u>	<u>198</u>	904	198	16	<u>808</u>	<u>221</u>	808	221	801	223
482.sphinx3	16	1608	194	<u>1609</u>	<u>194</u>	1616	193	16	1573	198	<u>1563</u>	<u>200</u>	1563	200

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

Submit Notes

The config file option 'submit' was used, along with 'pbind', to assign processes to cores.



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp_rate2006 = 197

Sun Blade X6270 (Intel Xeon X5570 2.93GHz)

SPECfp_rate_base2006 = 182

CPU2006 license: 6

Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Mar-2009

Hardware Availability: Apr-2009

Software Availability: Jun-2009

Operating System Notes

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

```
/etc/system parameters
tune_t_fsflushr=10
autoup=900
set lpg_alloc_prefer=1
set zfs:zfs_arc_max = 0x10000000
```

Platform Notes

```
AMIBIOS Build Date 1/26/09 ID 07.01.36.00
Default BIOS settings used except:
Intel VT-d: Disabled. VT-d, if enabled, supports
remapping of I/O DMA transfers for virtualization.
```

General Notes

447.dealIII (peak): "apache_stdccxx_4_2_1" src.alt was used.

447.dealIII (base): "apache_stdccxx_4_2_1" src.alt was used.

Base Compiler Invocation

C benchmarks:

```
/data1/20090309_ceres_x86/bin/cc
```

C++ benchmarks:

```
/data1/20090309_ceres_x86/bin/CC
```

Fortran benchmarks:

```
/data1/20090309_ceres_x86/bin/f90
```

Benchmarks using both Fortran and C:

```
/data1/20090309_ceres_x86/bin/cc /data1/20090309_ceres_x86/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
```

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp_rate2006 = 197

Sun Blade X6270 (Intel Xeon X5570 2.93GHz)

SPECfp_rate_base2006 = 182

CPU2006 license: 6

Test date: Mar-2009

Test sponsor: Sun Microsystems

Hardware Availability: Apr-2009

Tested by: Sun Microsystems

Software Availability: Jun-2009

Base Portability Flags (Continued)

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 -m64 -xpagesize=2M -xalias_level=std

C++ benchmarks:

-fast -xipo=2 -m64 -xpagesize=2M -xalias_level=compatible
-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 -xpagesize=2M

Benchmarks using both Fortran and C:

-fast(cc) -xipo=2 -m64 -xpagesize=2M -xalias_level=std -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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp_rate2006 = 197

Sun Blade X6270 (Intel Xeon X5570 2.93GHz)

SPECfp_rate_base2006 = 182

CPU2006 license: 6

Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Mar-2009

Hardware Availability: Apr-2009

Software Availability: Jun-2009

Peak Compiler Invocation

C benchmarks:

/data1/20090309_ceres_x86/bin/cc

C++ benchmarks:

/data1/20090309_ceres_x86/bin/CC

Fortran benchmarks:

/data1/20090309_ceres_x86/bin/f90

Benchmarks using both Fortran and C:

/data1/20090309_ceres_x86/bin/cc /data1/20090309_ceres_x86/bin/f90

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 -lbsdmalloc

482.sphinx3: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=2M -xalias_level=std -xunroll=6
-W2,-Aujam:notinners -lumem -lmvec

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.dealIII: -fast -xipo=2 -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 -xvector -xprefetch
-L/data1/stdcxx-4.2.1/build/lib
-R/data1/stdcxx-4.2.1/build/lib -lstd8D

450.soplex: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=2M -xrestrict -xalias_level=simple

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp_rate2006 = 197

Sun Blade X6270 (Intel Xeon X5570 2.93GHz)

SPECfp_rate_base2006 = 182

CPU2006 license: 6

Test date: Mar-2009

Test sponsor: Sun Microsystems

Hardware Availability: Apr-2009

Tested by: Sun Microsystems

Software Availability: Jun-2009

Peak Optimization Flags (Continued)

450.soplex (continued):

-xprefetch=no%auto -xdepend -library=stlport4 -xvector=simd

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: -fast -xipo=2 -m64 -xpagesize=2M

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

434.zeusmp: -xprofile=collect:./feedback(pass 1)

-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64

-xpagesize=2M -xvector=simd

437.leslie3d: -xprofile=collect:./feedback(pass 1)

-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64

-xvector=simd -lumem

459.GemsFDTD: -fast -xipo=2 -m64 -xpagesize=2M -xvector=simd

465.tonto: -xprofile=collect:./feedback(pass 1)

-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64

-xpagesize=2M -xvector=lib -xalias -xdepend -lbsdmalloc

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

436.cactusADM: -fast(cc) -fast(f90) -xipo=2 -m64 -xpagesize=2M

-xvector=simd

454.calculix: Same as 436.cactusADM

481.wrf: -xprofile=collect:./feedback(pass 1)

-xprofile=use:./feedback(pass 2) -fast(cc) -fast(f90)

-xipo=2 -m64 -xvector=simd



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp_rate2006 = 197

Sun Blade X6270 (Intel Xeon X5570 2.93GHz)

SPECfp_rate_base2006 = 182

CPU2006 license: 6

Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Mar-2009

Hardware Availability: Apr-2009

Software Availability: Jun-2009

Peak 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

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 01:59:30 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 28 April 2009.