



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation SPARC Enterprise M3000

SPECfp[®]_rate2006 = 34.9

SPECfp_rate_base2006 = 33.1

CPU2006 license: 6

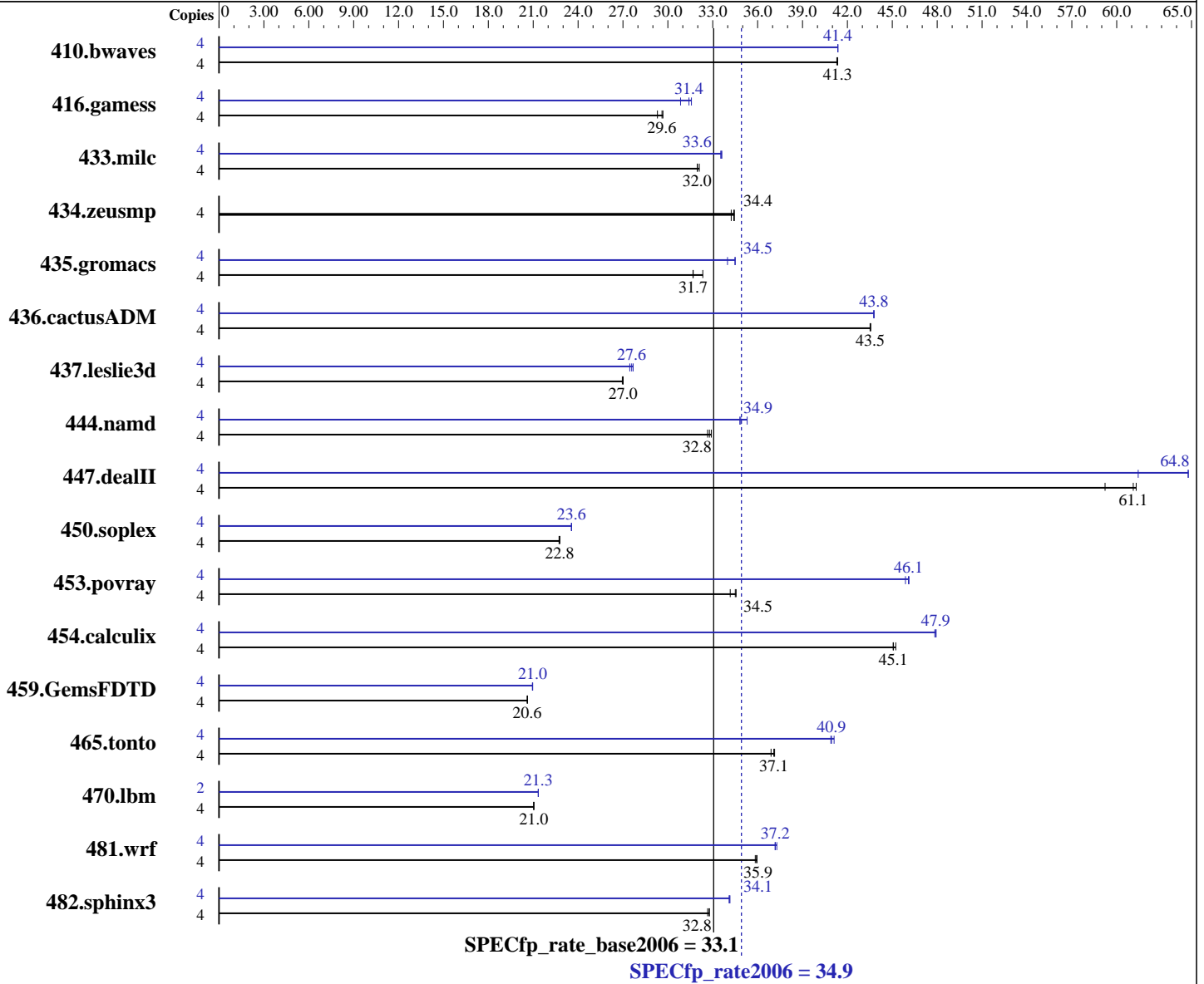
Test sponsor: Oracle Corporation

Tested by: Fujitsu

Test date: Jan-2011

Hardware Availability: Apr-2011

Software Availability: Sep-2010



Hardware

CPU Name: SPARC64 VII+
 CPU Characteristics:
 CPU MHz: 2860
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 2 threads/core
 CPU(s) orderable: 1 chip
 Primary Cache: 64 KB I + 64 KB D on chip per core
 Secondary Cache: 5632 KB I+D on chip per chip

Continued on next page

Software

Operating System: Oracle Solaris 10 9/10
 Compiler: Oracle Solaris Studio 12.2
 Auto Parallel: No
 File System: ufs
 System State: Default
 Base Pointers: 32-bit
 Peak Pointers: 32-bit
 Other Software: Apache C++ Standard Library V4.2.1



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation
SPARC Enterprise M3000

SPECfp_rate2006 = 34.9

SPECfp_rate_base2006 = 33.1

CPU2006 license: 6
Test sponsor: Oracle Corporation
Tested by: Fujitsu

Test date: Jan-2011
Hardware Availability: Apr-2011
Software Availability: Sep-2010

L3 Cache: None
Other Cache: None
Memory: 32 GB (8 x 4 GB, 2-way interleaved)
Disk Subsystem: 1 x 300 GB 10,000 RPM SAS
Other Hardware: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1316	41.3	1315	41.3	1315	41.3	4	1314	41.4	1314	41.4	1314	41.4
416.gamess	4	2640	29.7	2645	29.6	2673	29.3	4	2493	31.4	2480	31.6	2539	30.8
433.milc	4	1148	32.0	1149	32.0	1144	32.1	4	1095	33.5	1093	33.6	1093	33.6
434.zeusmp	4	1063	34.2	1058	34.4	1057	34.4	4	1063	34.2	1058	34.4	1057	34.4
435.gromacs	4	883	32.3	902	31.7	901	31.7	4	828	34.5	840	34.0	828	34.5
436.cactusADM	4	1098	43.5	1098	43.5	1097	43.6	4	1092	43.8	1092	43.8	1092	43.8
437.leslie3d	4	1395	27.0	1392	27.0	1392	27.0	4	1363	27.6	1370	27.5	1358	27.7
444.namd	4	975	32.9	982	32.7	979	32.8	4	922	34.8	909	35.3	920	34.9
447.dealII	4	749	61.1	773	59.2	746	61.3	4	706	64.8	706	64.8	745	61.4
450.soplex	4	1465	22.8	1468	22.7	1464	22.8	4	1415	23.6	1416	23.6	1416	23.6
453.povray	4	616	34.6	617	34.5	623	34.2	4	461	46.1	464	45.9	462	46.1
454.calculix	4	732	45.1	730	45.2	732	45.1	4	689	47.9	690	47.8	689	47.9
459.GemsFDTD	4	2058	20.6	2060	20.6	2060	20.6	4	2025	21.0	2026	20.9	2024	21.0
465.tonto	4	1061	37.1	1060	37.1	1067	36.9	4	957	41.1	961	40.9	962	40.9
470.lbm	4	2613	21.0	2612	21.0	2612	21.0	2	1288	21.3	1287	21.3	1288	21.3
481.wrf	4	1243	36.0	1244	35.9	1247	35.8	4	1198	37.3	1202	37.2	1202	37.2
482.sphinx3	4	2387	32.7	2380	32.8	2378	32.8	4	2283	34.2	2286	34.1	2285	34.1

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

Compiler Invocation Notes

Oracle Solaris Studio 12.2 is distributed with mandatory OS patches
118683-05 119963-20 120753-08
Oracle Solaris Studio 12.2 and patches are available at
<http://oracle.com/goto/solarisstudio>

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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation
SPARC Enterprise M3000

SPECfp_rate2006 = 34.9

SPECfp_rate_base2006 = 33.1

CPU2006 license: 6

Test sponsor: Oracle Corporation

Tested by: Fujitsu

Test date: Jan-2011

Hardware Availability: Apr-2011

Software Availability: Sep-2010

Submit Notes

Processes were assigned to specific processors using 'pbind' commands. The config file option 'submit' was used, along with a list of processors in the 'BIND' variable, to generate the pbind commands. (For details, please see the config file.)

Operating System Notes

ulimit -s 131072 was used to limit the space consumed by the stack (and therefore make more space available to the heap).

System Tunables:
(/etc/system parameters)

```
tune_t_fsflushr=10
  Controls how many seconds elapse between runs of the
  page flush daemon, fsflush.
autoup=600
  Causes pages older than the listed number of seconds to
  be written by fsflush.
bufhwm=3000
  Memory byte limit for caching I/O buffers.
segmap_percent=1
  Set maximum percent memory for file system cache.
```

Other System Settings:

```
The "webconsole" service was turned off using
svcadm disable webconsole
```

Platform Notes

Memory is 2-way interleaved by filling all slots with the same capacity DIMMs.

This result is measured on a SPARC Enterprise M3000 server from Fujitsu. The SPARC Enterprise M3000 server from Oracle and from Fujitsu are electrically equivalent.

General Notes

447.dealIII (peak): "apache_stdctx_4_2_1" src.alt was used.

447.dealIII (base): "apache_stdctx_4_2_1" src.alt was used.



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation
SPARC Enterprise M3000

SPECfp_rate2006 = 34.9
SPECfp_rate_base2006 = 33.1

CPU2006 license: 6
Test sponsor: Oracle Corporation
Tested by: Fujitsu

Test date: Jan-2011
Hardware Availability: Apr-2011
Software Availability: Sep-2010

Base Compiler Invocation

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

Base Optimization Flags

C benchmarks:
-fast -fma=fused -xipo=2 -xpagesize=4M -xlinkopt -xvector
-xalias_level=std -xprefetch_auto_type=indirect_array_access
-xprefetch_level=3 -xunroll=8 -l12amm
C++ benchmarks:
-xdepend -fast -fma=fused -xipo=2 -xpagesize=4M -xlinkopt -xvector
-xO4 -xalias_level=compatible -xprefetch=latx:0.5 -library=no%Cstd
-I/mnt/spec//stdcxx-4.2.1/include
-I/mnt/spec//stdcxx-4.2.1/build/include
-L/mnt/spec//stdcxx-4.2.1/build/lib -R/mnt/spec//stdcxx-4.2.1/build/lib
-lstd8d
Fortran benchmarks:
-fast -fma=fused -xipo=2 -xpagesize=4M -xlinkopt -xvector
-xprefetch_level=2 -l12amm
Benchmarks using both Fortran and C:
-fast(cc) -fast(f90) -fma=fused -xipo=2 -xpagesize=4M -xlinkopt
-xvector -xalias_level=std -xprefetch_auto_type=indirect_array_access
-xprefetch_level=3 -xunroll=8 -xprefetch_level=2 -l12amm

Base Other Flags

C benchmarks:
-xjobs=4 -V -#
C++ benchmarks:
-xjobs=4 -verbose=diags,version
Fortran benchmarks:
-xjobs=4 -V -v

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation
SPARC Enterprise M3000

SPECfp_rate2006 = 34.9

SPECfp_rate_base2006 = 33.1

CPU2006 license: 6

Test sponsor: Oracle Corporation

Tested by: Fujitsu

Test date: Jan-2011

Hardware Availability: Apr-2011

Software Availability: Sep-2010

Base Other Flags (Continued)

Benchmarks using both Fortran and C:
-xjobs=4 -V -# -v

Peak Compiler Invocation

C benchmarks:

cc

C++ benchmarks:

CC

Fortran benchmarks:

f90

Benchmarks using both Fortran and C:

cc f90

Peak Optimization Flags

C benchmarks:

```
433.milc: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xipo=2 -xarch=generic -xcache=generic
-xlinkopt -fsimple=1 -W2,-Ainline:rs=400 -xalias_level=std
-xprefetch_auto_type=indirect_array_access -xprefetch_level=3
-xunroll=2
```

```
470.lbm: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xipo=2 -xO4 -xprefetch_level=2
```

```
482.sphinx3: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xipo=1 -xalias_level=strong
-xprefetch=latx:1.5 -xunroll=4 -lbsdmalloc
```

C++ benchmarks:

```
444.namd: -xdepend -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xalias_level=compatible -library=stlport4
-xipo=1 -xO3 -xchip=generic -xinline= -xlinkopt
-xprefetch_level=2 -xprefetch=latx:2.5 -l12amm -lfast
```

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation
SPARC Enterprise M3000

SPECfp_rate2006 = 34.9
SPECfp_rate_base2006 = 33.1

CPU2006 license: 6

Test sponsor: Oracle Corporation

Tested by: Fujitsu

Test date: Jan-2011

Hardware Availability: Apr-2011

Software Availability: Sep-2010

Peak Optimization Flags (Continued)

447.deallI: -xdepend -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xalias_level=compatible -library=no%Cstd
-I/mnt/spec//stdcxx-4.2.1/include
-I/mnt/spec//stdcxx-4.2.1/build/include -xipo=2
-xchip=generic -xprefetch_auto_type=indirect_array_access
-xrestrict -xprefetch_level=2
-L/mnt/spec//stdcxx-4.2.1/build/lib
-R/mnt/spec//stdcxx-4.2.1/build/lib -lstd8d

450.soplex: -xdepend -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xalias_level=compatible -library=stlport4
-xarch=generic -xprefetch=no%auto

453.povray: -xdepend -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xalias_level=compatible -library=stlport4
-M /usr/lib/ld/map.bssalign -xipo=2 -xO4 -xprefetch=no%auto
-xunroll=4 -lfast -ll2amm -lbsdmalloc

Fortran benchmarks:

410.bwaves: -fast -fma=fused -xpagesize=4M -xipo=2 -xlinkopt
-xprefetch_level=2 -xprefetch=latx:2

416.gamess: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -M /usr/lib/ld/map.bssalign -xipo=1 -xO3
-xinline= -xprefetch=no%auto -xunroll=3 -lfast -ll2amm
-lbsdmalloc

434.zeusmp: basepeak = yes

437.leslie3d: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -M /usr/lib/ld/map.bssalign -xipo=1 -xO3
-xcache=generic -xprefetch=latx:2 -xunroll=10 -ll2amm

459.GemsFDTD: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xipo=1 -xarch=sparcvis2
-xprefetch_auto_type=indirect_array_access -xprefetch_level=2
-xprefetch=latx:0.1 -xunroll=7

465.tonto: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xipo=2 -xprefetch=no%auto -xunroll=4
-lbsdmalloc

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation
SPARC Enterprise M3000

SPECfp_rate2006 = 34.9

SPECfp_rate_base2006 = 33.1

CPU2006 license: 6
Test sponsor: Oracle Corporation
Tested by: Fujitsu

Test date: Jan-2011
Hardware Availability: Apr-2011
Software Availability: Sep-2010

Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

435.gromacs: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast(cc) -fast(f90)
-fma=fused -xpagesize=4M -xO4 -xchip=generic
-xcache=generic -fsimple=0 -xprefetch=no%auto -xunroll=3

436.cactusADM: -fast(cc) -fast(f90) -fma=fused -xpagesize=4M
-xalias_level=std -xunroll=12 -lfast

454.calculix: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast(cc) -fast(f90)
-fma=fused -xpagesize=4M -xipo=2 -xcache=generic
-xprefetch=latx:3 -xunroll=8 -xalias_level=std -lmopt

481.wrf: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast(cc) -fast(f90)
-fma=fused -xpagesize=4M -xalias_level=std -xipo=2 -xO4
-xcache=generic -xprefetch_auto_type=indirect_array_access
-xprefetch=latx:1

Peak Other Flags

C benchmarks:
-xjobs=4 -V -#

C++ benchmarks:
-xjobs=4 -verbose=diags,version

Fortran benchmarks:
-xjobs=4 -V -v

Benchmarks using both Fortran and C:
-xjobs=4 -V -# -v

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

<http://www.spec.org/cpu2006/flags/Oracle-Solaris-Studio12.2-SPARC.20110413.html>

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

<http://www.spec.org/cpu2006/flags/Oracle-Solaris-Studio12.2-SPARC.20110413.xml>



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Oracle Corporation
SPARC Enterprise M3000

SPECfp_rate2006 = 34.9

SPECfp_rate_base2006 = 33.1

CPU2006 license: 6

Test sponsor: Oracle Corporation

Tested by: Fujitsu

Test date: Jan-2011

Hardware Availability: Apr-2011

Software Availability: Sep-2010

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 19:26:20 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 12 April 2011.