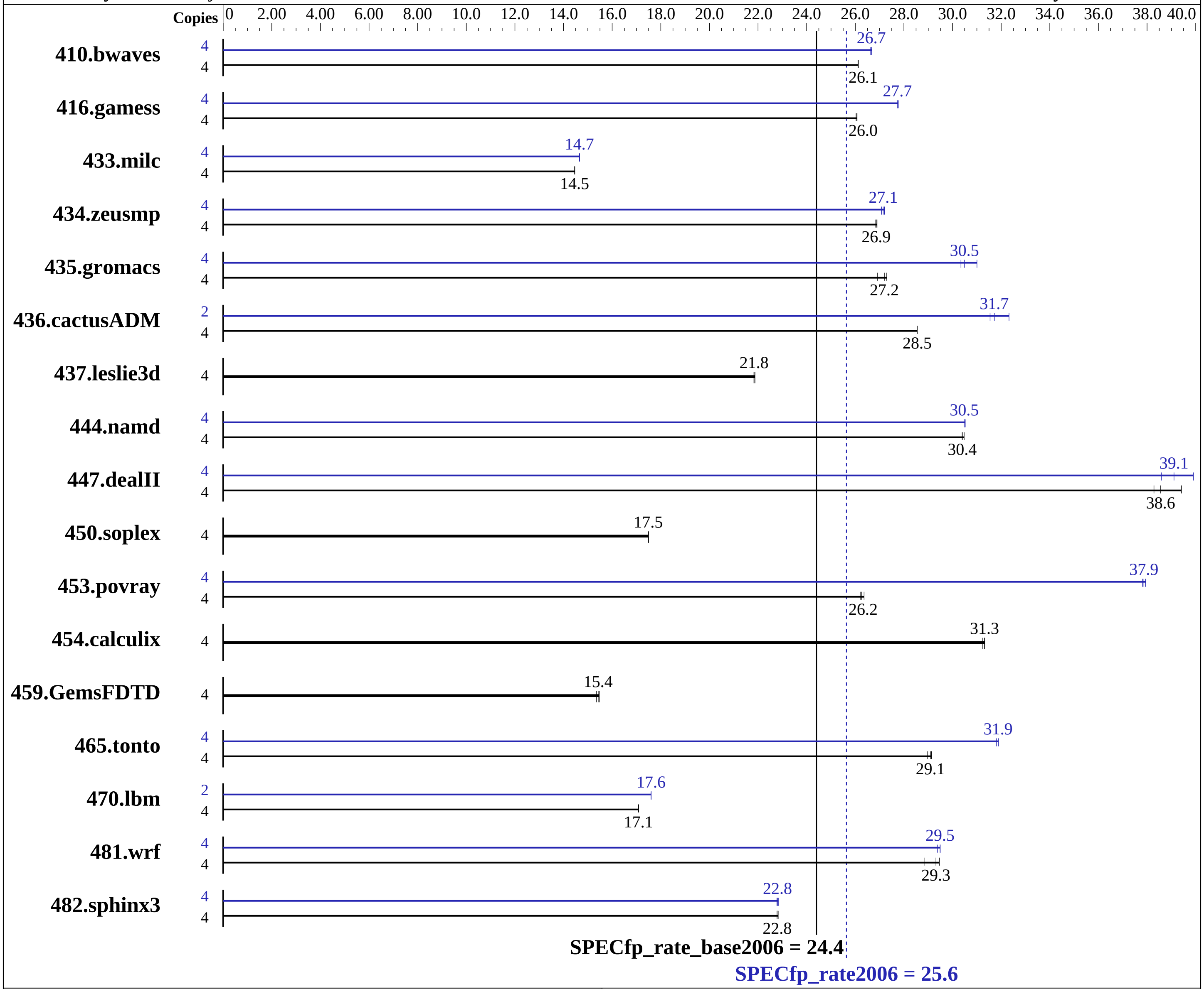
SPEC® CFP2006 Result

Sun Microsystems
Sun SPARC Enterprise M3000

SPECfp®_rate2006 = 25.6

SPECfp_rate_base2006 = 24.4

CPU2006 license:	6	**Test date:**	Sep-2008
Test sponsor:	Sun Microsystems	**Hardware Availability:**	Jan-2009
Tested by:	Fujitsu Limited	**Software Availability:**	Oct-2008



Hardware

CPU Name:	SPARC64 VII
CPU Characteristics:	2 Cores
CPU MHz:	2520
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:	5 MB I+D on chip per chip

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Software

Operating System:	Solaris 10 10/08
Compiler:	Sun Studio 12 with patches 124861-08, 124863-06, 124867-07, 127143-03, 127000-05, 127001-01 (see patch information below)
Auto Parallel:	No
File System:	ufs
System State:	Default
Base Pointers:	32-bit

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L3 Cache: None
Other Cache: None
Memory: 16 GB (2 GB x 8), 2-way interleaved
Disk Subsystem: 73 GB 10,000 RPM Fujitsu MAY2073RC SAS
Other Hardware: None

Peak Pointers: 32-bit
Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	**2081**	**26.1**	2081	26.1	2081	26.1	4	2041	26.6	2037	26.7	**2039**	**26.7**
416.gamess	4	**3008**	**26.0**	3008	26.0	3004	26.1	4	**2824**	**27.7**	2821	27.8	2826	27.7
433.milc	4	2540	14.5	2539	14.5	**2540**	**14.5**	4	**2506**	**14.7**	2504	14.7	2506	14.7
434.zeusmp	4	1354	26.9	**1355**	**26.9**	1356	26.8	4	1338	27.2	**1341**	**27.1**	1344	27.1
435.gromacs	4	1061	26.9	**1050**	**27.2**	1046	27.3	4	921	31.0	941	30.3	**937**	**30.5**
436.cactusADM	4	1674	28.5	**1675**	**28.5**	1675	28.5	2	758	31.5	**754**	**31.7**	739	32.3
437.leslie3d	4	**1722**	**21.8**	1719	21.9	1722	21.8	4	**1722**	**21.8**	1719	21.9	1722	21.8
444.namd	4	1053	30.5	**1055**	**30.4**	1055	30.4	4	1051	30.5	1052	30.5	**1052**	**30.5**
447.dealII	4	1195	38.3	1161	39.4	**1187**	**38.6**	4	1147	39.9	1186	38.6	**1170**	**39.1**
450.soplex	4	**1908**	**17.5**	1908	17.5	1907	17.5	4	**1908**	**17.5**	1908	17.5	1907	17.5
453.povray	4	812	26.2	807	26.4	**811**	**26.2**	4	563	37.8	**562**	**37.9**	561	37.9
454.calculix	4	1054	31.3	**1054**	**31.3**	1057	31.2	4	1054	31.3	**1054**	**31.3**	1057	31.2
459.GemsFDTD	4	2763	15.4	2744	15.5	**2751**	**15.4**	4	2763	15.4	2744	15.5	**2751**	**15.4**
465.tonto	4	**1353**	**29.1**	1351	29.1	1358	29.0	4	**1235**	**31.9**	1238	31.8	1234	31.9
470.lbm	4	3218	17.1	3216	17.1	**3217**	**17.1**	2	1561	17.6	1561	17.6	**1561**	**17.6**
481.wrf	4	1550	28.8	1517	29.5	**1524**	**29.3**	4	1521	29.4	**1515**	**29.5**	1515	29.5
482.sphinx3	4	**3421**	**22.8**	3415	22.8	3421	22.8	4	3423	22.8	**3419**	**22.8**	3414	22.8

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

Compiler Invocation Notes

```
Sun Studio compiler patches are available at
   http://developers.sun.com/sunstudio/downloads/patches/ss12_patches.jsp
```

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

```
Shell Environments:
   Default setting.

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 Fujitsu SPARC Enterprise M3000 Server.
Note that the Fujitsu SPARC Enterprise M3000 and Sun SPARC Enterprise
M3000 are electrically equivalent.
```

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 -xprefetch_level=1 -xalias_level=std -xprefetch_auto_type=indirect_array_access`

C++ benchmarks:
`-library=stlport4 -fast -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=1 -xalias_level=compatible`

Fortran benchmarks:
`-fast -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=1`

Benchmarks using both Fortran and C:
`-fast`(cc) `-fast`(f90) `-fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=1 -xalias_level=std -xprefetch_auto_type=indirect_array_access`

Base Other Flags

C benchmarks:
`-xjobs=4`

C++ benchmarks:
`-xjobs=4`

Fortran benchmarks:
`-xjobs=4`

Benchmarks using both Fortran and C:
`-xjobs=4`

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: -fast -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=2 -fsimple=1 -xprefetch_auto_type=indirect_array_access -W2,-Ainline:rs=400 -xalias_level=std

470.lbm: -fast -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=3 -xvector -xarch=generic

482.sphinx3: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xipo=2 -xpagesize=4M -xinline= -xprefetch=no -xalias_level=strong -lfast -ll2amm

C++ benchmarks:

444.namd: -library=stlport4 -fast -fma=fused -xipo=2 -xpagesize=4M -xdepend -xalias_level=compatible

447.dealII: -library=stlport4 -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xipo=2 -xpagesize=4M -xdepend -xalias_level=compatible -xrestrict -xprefetch_level=2 -xprefetch_auto_type=indirect_array_access

450.soplex: basepeak = yes

453.povray: -library=stlport4 -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xipo=2 -xpagesize=4M -xdepend -xalias_level=compatible

Fortran benchmarks:

410.bwaves: -fast -xipo=2 -xprefetch_level=2 -xprefetch_auto_type=indirect_array_access

416.gamess: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xipo=2 -xpagesize=4M

434.zeusmp: -fast -fma=fused -xipo=2 -xpagesize=4M -lmopt

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xipo=2 -lfast

Benchmarks using both Fortran and C:

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Peak Optimization Flags (Continued)

435.gromacs: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast(cc) -fast(f90) -fma=fused -xipo=2 -xpagesize=4M -xinline= -xchip=generic -fsimple=0

436.cactusADM: -fast(cc) -fast(f90) -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=3 -xalias_level=std -xprefetch_auto_type=indirect_array_access

454.calculix: basepeak = yes

481.wrf: -fast(cc) -fast(f90) -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=2 -xalias_level=std -xprefetch_level=3 -xprefetch_auto_type=indirect_array_access

Peak Other Flags

C benchmarks:
-xjobs=4

C++ benchmarks:
-xjobs=4

Fortran benchmarks:
-xjobs=4

Benchmarks using both Fortran and C:
-xjobs=4

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss4.2.r3.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss4.2.r3.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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