SPEC® CFP2006 Result

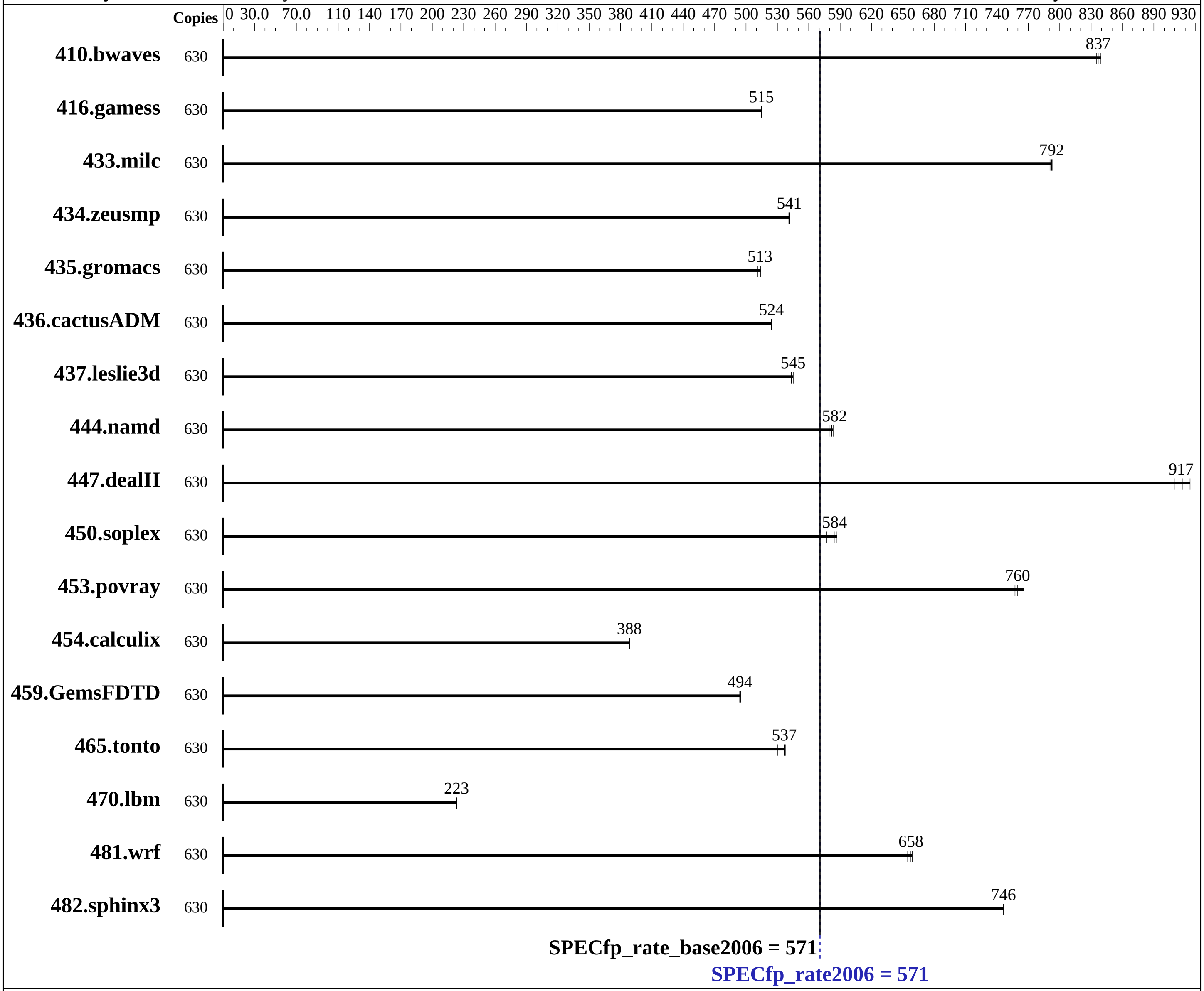
Sun Microsystems
Sun Blade 6000

SPECfp®_rate2006 = 571

SPECfp_rate_base2006 = 571

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

Test date: Mar-2008
Hardware Availability: Feb-2008
Software Availability: Feb-2008



Hardware	
CPU Name:	UltraSPARC T2
CPU Characteristics:	
CPU MHz:	1417
FPU:	Integrated
CPU(s) enabled:	80 cores, 10 chips, 8 cores/chip, 8 threads/core
CPU(s) orderable:	1 to 10 Sun Blade T6320 Modules
Primary Cache:	16 KB I + 8 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip

Continued on next page

Software	
Operating System:	Solaris 10 8/07 + patches (see notes)
Compiler:	Sun Studio 12 (see patch information below)
Auto Parallel:	No
File System:	NFSv3
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32-bit
Other Software:	None

Sun Microsystems
Sun Blade 6000

SPECfp_rate2006 = 571

SPECfp_rate_base2006 = 571

CPU2006 license: 6 **Test date:** Mar-2008

Test sponsor: Sun Microsystems **Hardware Availability:** Feb-2008

Tested by: Sun Microsystems **Software Availability:** Feb-2008

L3 Cache:	None
Other Cache:	None
Memory:	640 GB (10 x 16 x 4 GB)
Disk Subsystem:	975 GB RAID 5 via NFS
Other Hardware:	1 GbE network adapter on each blade.

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	630	**10232**	**837**	10200	839	10253	835	630	**10232**	**837**	10200	839	10253	835
416.gamess	630	23962	515	23968	515	**23964**	**515**	630	23962	515	23968	515	**23964**	**515**
433.milc	630	7295	793	7314	791	**7299**	**792**	630	7295	793	7314	791	**7299**	**792**
434.zeusmp	630	10581	542	**10590**	**541**	10598	541	630	10581	542	**10590**	**541**	10598	541
435.gromacs	630	8750	514	8797	511	**8761**	**513**	630	8750	514	8797	511	**8761**	**513**
436.cactusADM	630	14400	523	**14359**	**524**	14353	525	630	14400	523	**14359**	**524**	14353	525
437.leslie3d	630	10898	543	10864	545	**10866**	**545**	630	10898	543	10864	545	**10866**	**545**
444.namd	630	8662	583	8718	580	**8683**	**582**	630	8662	583	8718	580	**8683**	**582**
447.dealII	630	7795	925	**7858**	**917**	7924	910	630	7795	925	**7858**	**917**	7924	910
450.soplex	630	**8991**	**584**	9112	577	8951	587	630	**8991**	**584**	9112	577	8951	587
453.povray	630	4426	757	**4411**	**760**	4377	766	630	4426	757	**4411**	**760**	4377	766
454.calculix	630	**13382**	**388**	13368	389	13390	388	630	**13382**	**388**	13368	389	13390	388
459.GemsFDTD	630	**13525**	**494**	13532	494	13510	495	630	**13525**	**494**	13532	494	13510	495
465.tonto	630	11532	538	**11551**	**537**	11687	530	630	11532	538	**11551**	**537**	11687	530
470.lbm	630	38818	223	38765	223	**38794**	**223**	630	38818	223	38765	223	**38794**	**223**
481.wrf	630	**10699**	**658**	10679	659	10761	654	630	**10699**	**658**	10679	659	10761	654
482.sphinx3	630	**16453**	**746**	16446	747	16460	746	630	**16453**	**746**	16446	747	16460	746

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
The tested configuration included patch 124867-02, 124861-04, 124863-01
```

Operating System Notes

```
The Sun Blade 6000 was tested with 10x T6320 Modules,
each containing 1x UltraSPARC T2 chip.

The Sun Blade T6320 is supported by Solaris 10 8/07
plus a factory-installed set of patches.  As tested, the
```

Continued on next page

Operating System Notes (Continued)

```
system used a 15 January 2008 pre-release build of the
patch set.

OS and test harness settings include:

- On each T6320 Module:
    - The "webconsole" service was turned off using
         svcadm disable webconsole
    - /etc/system settings:
         autoup = 600
         set bufhwm_pct=1
         set segmap_percent=2
         set tsb_rss_factor=128
         tune_t_fsflushr = 10
    - Process settings:
         ulimit -s 131072

- The "submit" feature was used with a perl procedure, which did
  arithmetic to derive processor numbers from the SPEC copy number

Additional details about the above points be found in the "Platform
Settings" section of the associated flags file.
```

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:
 -g -fast -xipo=2 -xpagesize=4M -xprefetch_level=2 -xalias_level=std
 -xprefetch_level=3 -xprefetch_auto_type=indirect_array_access
 -M /usr/lib/ld/map.bssalign

C++ benchmarks:
 -g0 -library=stlport4 -fast -xipo=2 -xpagesize=4M -xprefetch_level=2
 -xdepend -xalias_level=compatible -M /usr/lib/ld/map.bssalign

Continued on next page

Sun Microsystems
Sun Blade 6000

SPECfp_rate2006 = 571
SPECfp_rate_base2006 = 571

CPU2006 license: 6
Test sponsor: Sun Microsystems
Tested by: Sun Microsystems
Test date: Mar-2008
Hardware Availability: Feb-2008
Software Availability: Feb-2008

Base Optimization Flags (Continued)

Fortran benchmarks:
```
-g -fast -xipo=2 -xpagesize=4M -xprefetch_level=2
-M /usr/lib/ld/map.bssalign
```

Benchmarks using both Fortran and C:
```
-g -fast(cc) -fast(f90) -xipo=2 -xpagesize=4M -xprefetch_level=2
-xalias_level=std -xprefetch_level=3
-xprefetch_auto_type=indirect_array_access -M /usr/lib/ld/map.bssalign
```

Base Other Flags

C benchmarks:
```
-xjobs=32 -V -#
```

C++ benchmarks:
```
-xjobs=32 -verbose=diags,version
```

Fortran benchmarks:
```
-xjobs=32 -V -v
```

Benchmarks using both Fortran and C:
```
-xjobs=32 -V -# -v
```

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: basepeak = yes

Fortran benchmarks:

Continued on next page

Peak Optimization Flags (Continued)

410.bwaves: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: basepeak = yes

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

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-multinode.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-multinode.xml

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

Tested with SPEC CPU2006 v1.0.1.
Report generated on Tue Jul 22 16:47:44 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 29 April 2008.