



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Sun Microsystems Sun Fire X4200

SPECint®\_rate2006 = 26.4

SPECint\_rate\_base2006 = 23.1

CPU2006 license: 6

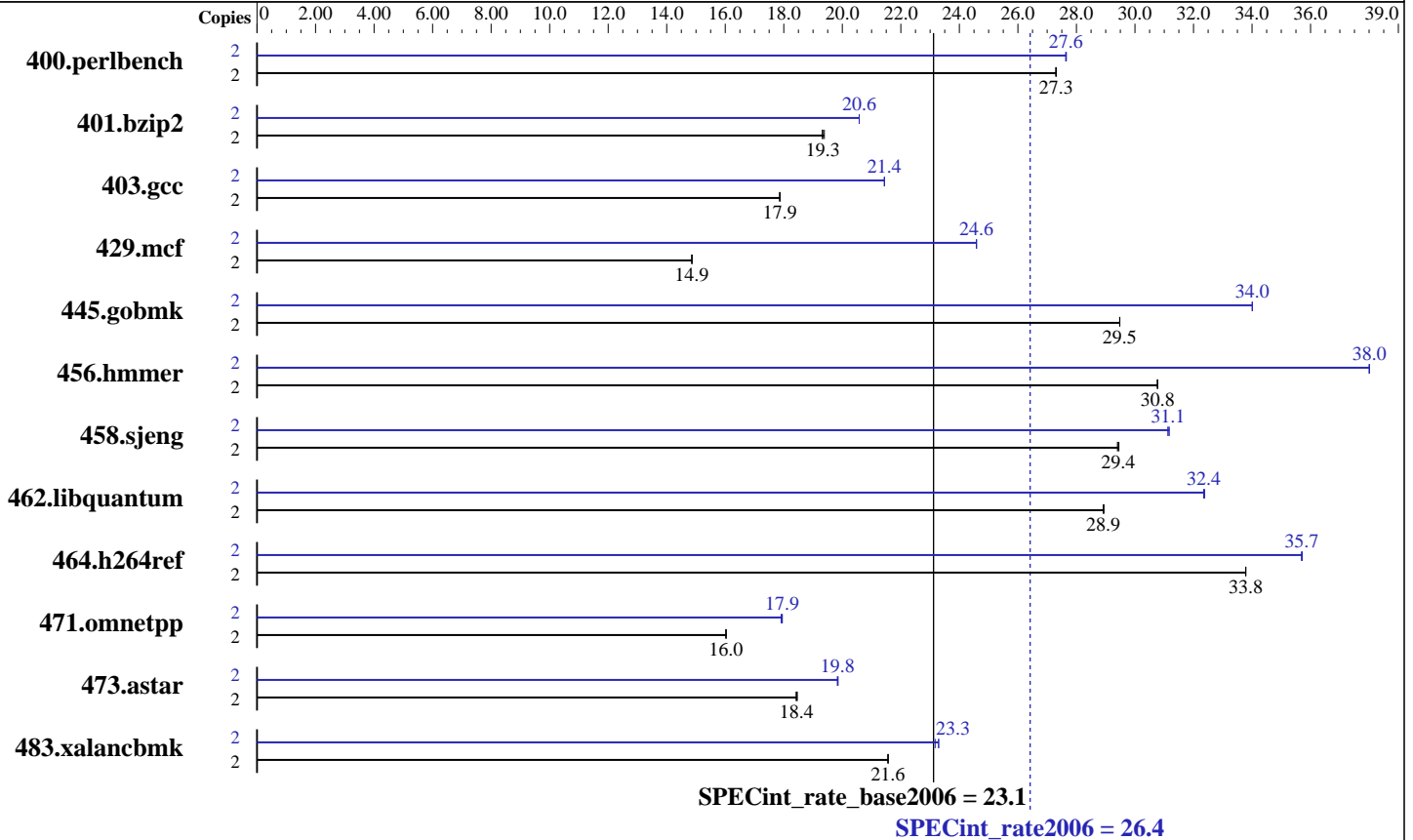
Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Apr-2006

Hardware Availability: May-2006

Software Availability: Jul-2006



### Hardware

CPU Name: AMD Opteron 256  
 CPU Characteristics:  
 CPU MHz: 3000  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 2 chips, 1 core/chip  
 CPU(s) orderable: 1-2 chips  
 Primary Cache: 64 KB I + 64 KB D on chip per chip  
 Secondary Cache: 1 MB I+D on chip per chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8x2 GB, PC3200 CL3 DDR ECC Reg)  
 Disk Subsystem: SAS,36GB,10K RPM  
 Other Hardware: None

### 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 CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems  
Sun Fire X4200

SPECint\_rate2006 = 26.4  
SPECint\_rate\_base2006 = 23.1

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

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

## Results Table

Benchmark	Base						Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	2	715	27.3	<b><u>716</u></b>	<b><u>27.3</u></b>	716	27.3	2	<b><u>707</u></b>	<b><u>27.6</u></b>	707	27.7	707	27.6
401.bzip2	2	996	19.4	<b><u>998</u></b>	<b><u>19.3</u></b>	999	19.3	2	938	20.6	<b><u>938</u></b>	<b><u>20.6</u></b>	938	20.6
403.gcc	2	901	17.9	902	17.9	<b><u>901</u></b>	<b><u>17.9</u></b>	2	<b><u>751</u></b>	<b><u>21.4</u></b>	751	21.4	751	21.4
429.mcf	2	1228	14.9	1227	14.9	<b><u>1227</u></b>	<b><u>14.9</u></b>	2	742	24.6	742	24.6	<b><u>742</u></b>	<b><u>24.6</u></b>
445.gobmk	2	712	29.5	<b><u>712</u></b>	<b><u>29.5</u></b>	712	29.5	2	617	34.0	<b><u>617</u></b>	<b><u>34.0</u></b>	617	34.0
456.hammer	2	606	30.8	<b><u>606</u></b>	<b><u>30.8</u></b>	607	30.8	2	491	38.0	491	38.0	<b><u>491</u></b>	<b><u>38.0</u></b>
458.sjeng	2	823	29.4	<b><u>822</u></b>	<b><u>29.4</u></b>	822	29.5	2	<b><u>777</u></b>	<b><u>31.1</u></b>	776	31.2	777	31.1
462.libquantum	2	1432	28.9	1433	28.9	<b><u>1433</u></b>	<b><u>28.9</u></b>	2	1280	32.4	1281	32.3	<b><u>1281</u></b>	<b><u>32.4</u></b>
464.h264ref	2	1310	33.8	1310	33.8	<b><u>1310</u></b>	<b><u>33.8</u></b>	2	1239	35.7	<b><u>1240</u></b>	<b><u>35.7</u></b>	1240	35.7
471.omnetpp	2	780	16.0	780	16.0	<b><u>780</u></b>	<b><u>16.0</u></b>	2	696	17.9	698	17.9	<b><u>697</u></b>	<b><u>17.9</u></b>
473.astar	2	760	18.5	<b><u>761</u></b>	<b><u>18.4</u></b>	762	18.4	2	<b><u>708</u></b>	<b><u>19.8</u></b>	707	19.9	708	19.8
483.xalancbmk	2	<b><u>640</u></b>	<b><u>21.6</u></b>	640	21.6	640	21.6	2	<b><u>593</u></b>	<b><u>23.3</u></b>	596	23.2	592	23.3

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

## Operating System Notes

Processes were bound to cores using "submit" and "pbind".

```
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.

## Platform Notes

Default BIOS settings were used.



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems  
Sun Fire X4200

SPECint\_rate2006 = 26.4

SPECint\_rate\_base2006 = 23.1

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

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

## Base Compiler Invocation

C benchmarks:  
cc  
  
C++ benchmarks:  
CC

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_SOLARIS\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
403.gcc: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_SOLARIS  
429.mcf: -DSPEC\_CPU\_LP64  
445.gobmk: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_SOLARIS  
464.h264ref: -DSPEC\_CPU\_LP64  
471.omnetpp: -DSPEC\_CPU\_LP64  
473.astar: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_SOLARIS

## Base Optimization Flags

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

## Base Other Flags

C benchmarks:  
-V  
  
C++ benchmarks:  
-verbose=version

## Peak Compiler Invocation

C benchmarks:  
cc

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems  
Sun Fire X4200

SPECint\_rate2006 = 26.4  
SPECint\_rate\_base2006 = 23.1

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

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

## Peak Compiler Invocation (Continued)

C++ benchmarks:  
CC

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_SOLARIS\_X64  
403.gcc: -DSPEC\_CPU\_SOLARIS  
462.libquantum: -DSPEC\_CPU\_SOLARIS  
483.xalancbmk: -DSPEC\_CPU\_SOLARIS

## Peak Optimization Flags

C benchmarks:

400.perlbench: -fast -xarch=amd64a  
401.bzip2: ONESTEP -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xpagesize=2m  
-xcrossfile -xarch=sse2a -M /usr/lib/ld/map.bssalign  
403.gcc: -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xipo=2  
-xbuiltin=%none  
429.mcf: -fast -xpagesize=2m -M /usr/lib/ld/map.bssalign  
445.gobmk: -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xarch=amd64a  
-xrestrict -xalias\_level=strong -xdepend  
456.hmmer: -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xarch=amd64a  
458.sjeng: -fast -xarch=amd64a -xipo=2 -xprefetch=auto  
-xprefetch\_level=3 -xpagesize=2m  
462.libquantum: -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xarch=amd64a  
-xipo=2 -xunroll=8  
464.h264ref: -fast -xarch=amd64a -xipo=2 -xvector -xunroll=8  
-xalias\_level=strong -xrestrict

C++ benchmarks:

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems  
Sun Fire X4200

SPECint\_rate2006 = 26.4  
SPECint\_rate\_base2006 = 23.1

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)

471.omnetpp: -fast -xarch=amd64a -xipo=2 -xprefetch\_level=3  
-xpagesize=2m -Qoption ube -fsimple=3 -library=stlport4  
  
473.astar: -fast -xarch=amd64a -xipo=2 -xprefetch\_level=3  
-xpagesize=2m -library=stlport4  
  
483.xalancbmk: -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xipo=2  
-xarch=sse2a -library=stlport4

## Peak Other Flags

C benchmarks:  
-V  
  
C++ benchmarks:  
-verbose=version

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 SPECint 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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v91.  
Report generated on Tue Jul 22 09:56:48 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 24 August 2006.