



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Sun Microsystems Sun Fire X4100 M2

SPECint®\_rate2006 = 50.9

SPECint\_rate\_base2006 = 45.1

CPU2006 license: 6

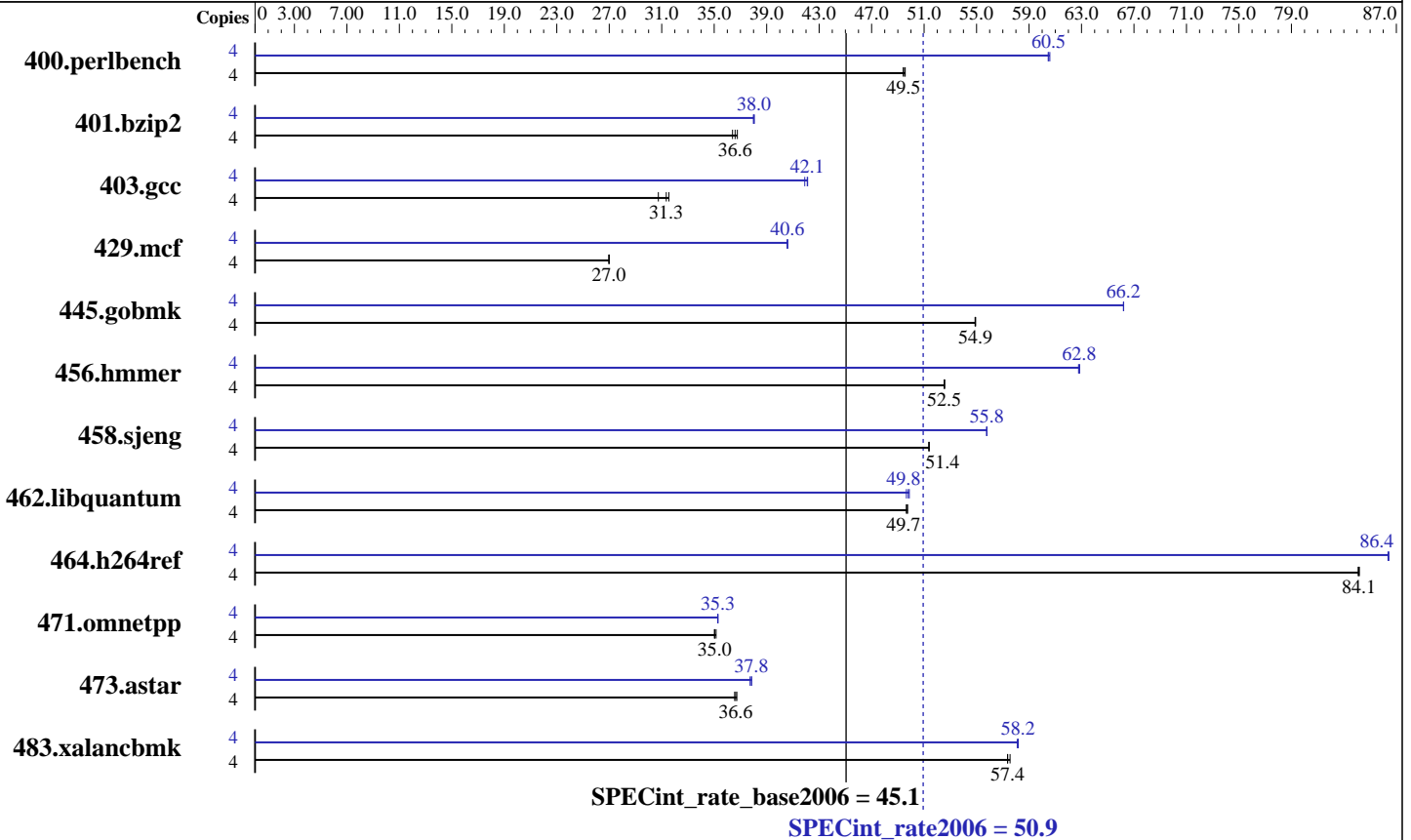
Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Apr-2007

Hardware Availability: Oct-2006

Software Availability: Aug-2006



### Hardware

CPU Name: AMD Opteron 2220  
 CPU Characteristics:  
 CPU MHz: 2800  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 64 KB I + 64 KB D on chip per core  
 Secondary Cache: 1 MB I+D on chip per core  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8x2GB, DDR2-667 CL5 ECC Reg Dual Rank)  
 Disk Subsystem: SAS, 72 GB, 10K RPM  
 Other Hardware: None

### Software

Operating System: RedHat Enterprise Linux AS release 4 Update 5  
 Compiler: QLogic PathScale Compiler Suite, Release 2.5  
 Auto Parallel: No  
 File System: ext3  
 System State: Multi-user, run level 3  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: MicroQuill's SmartHeap 8.0 32-bit Library for Linux



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems  
Sun Fire X4100 M2

SPECint\_rate2006 = 50.9  
SPECint\_rate\_base2006 = 45.1

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

Test date: Apr-2007  
Hardware Availability: Oct-2006  
Software Availability: Aug-2006

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	791	49.4	789	49.6	<b>789</b>	<b>49.5</b>	4	645	60.6	<b>646</b>	<b>60.5</b>	646	60.5
401.bzip2	4	1050	36.8	1061	36.4	<b>1055</b>	<b>36.6</b>	4	<b>1015</b>	<b>38.0</b>	1016	38.0	1014	38.1
403.gcc	4	1047	30.7	1021	31.5	<b>1027</b>	<b>31.3</b>	4	768	41.9	764	42.1	<b>765</b>	<b>42.1</b>
429.mcf	4	1351	27.0	<b>1352</b>	<b>27.0</b>	1353	27.0	4	<b>899</b>	<b>40.6</b>	899	40.6	899	40.6
445.gobmk	4	764	54.9	765	54.9	<b>764</b>	<b>54.9</b>	4	634	66.2	634	66.2	<b>634</b>	<b>66.2</b>
456.hmmer	4	710	52.6	710	52.5	<b>710</b>	<b>52.5</b>	4	595	62.8	594	62.9	<b>594</b>	<b>62.8</b>
458.sjeng	4	<b>942</b>	<b>51.4</b>	942	51.4	942	51.4	4	868	55.8	868	55.8	<b>868</b>	<b>55.8</b>
462.libquantum	4	1670	49.6	<b>1667</b>	<b>49.7</b>	1666	49.7	4	1669	49.6	<b>1664</b>	<b>49.8</b>	1662	49.9
464.h264ref	4	1052	84.2	<b>1052</b>	<b>84.1</b>	1053	84.1	4	1025	86.4	<b>1024</b>	<b>86.4</b>	1024	86.4
471.omnetpp	4	711	35.1	714	35.0	<b>714</b>	<b>35.0</b>	4	708	35.3	709	35.3	<b>709</b>	<b>35.3</b>
473.astar	4	768	36.6	<b>766</b>	<b>36.6</b>	765	36.7	4	744	37.7	<b>742</b>	<b>37.8</b>	742	37.9
483.xalancbmk	4	480	57.6	481	57.4	<b>481</b>	<b>57.4</b>	4	<b>474</b>	<b>58.2</b>	475	58.1	474	58.2

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

## General Notes

taskset utility used to bind CPU(s) to processes  
Default BIOS settings was used.

This result was measured on the Sun Fire X4100 M2. In addition,  
Sun has submitted the same result for the Sun Fire X4200 M2, which is  
electronically equivalent to the Sun Fire X4100 M2.

## Base Compiler Invocation

C benchmarks:  
pathcc

C++ benchmarks:  
pathCC

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
403.gcc: -DSPEC\_CPU\_LP64  
429.mcf: -DSPEC\_CPU\_LP64  
445.gobmk: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECint\_rate2006 = 50.9

Sun Fire X4100 M2

SPECint\_rate\_base2006 = 45.1

CPU2006 license: 6

Test date: Apr-2007

Test sponsor: Sun Microsystems

Hardware Availability: Oct-2006

Tested by: Sun Microsystems

Software Availability: Aug-2006

## Base Portability Flags (Continued)

458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX  
464.h264ref: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-Ofast

C++ benchmarks:  
-Ofast -m32 -L/data1/SmartHeap\_8smp/lib -lsmartheap\_smp

## Base Other Flags

C benchmarks:  
-IPA:max\_jobs=4

C++ benchmarks:  
-IPA:max\_jobs=4

## Peak Compiler Invocation

C benchmarks:  
pathcc

C++ benchmarks:  
pathCC

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -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\_LINUX  
464.h264ref: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LINUX



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems  
Sun Fire X4100 M2

SPECint\_rate2006 = 50.9  
SPECint\_rate\_base2006 = 45.1

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

Test date: Apr-2007  
Hardware Availability: Oct-2006  
Software Availability: Aug-2006

## Peak Optimization Flags

C benchmarks:

400.perlbench: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -Ofast

401.bzip2: -O3 -LNO:ou\_prod\_max=10 -OPT:Ofast -OPT:alias=disjoint

403.gcc: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -m32 -O3  
-OPT:Ofast

429.mcf: -m32 -O2 -ipa -L/data1/SmartHeap\_8smp/lib -lsmartheap\_smp

445.gobmk: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-OPT:alias=disjoint -LNO:simd=0 -LNO:minvariant=off  
-WOPT:retype\_expr=on

456.hmmer: -O2 -OPT:alias=disjoint -WOPT:aggstr=0 -CG:cflow=0

458.sjeng: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:plimit=50000 -IPA:pu\_reorder=2

462.libquantum: -O3 -ipa -CG:local\_fwd\_sched=on -IPA:space=1000

464.h264ref: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:plimit=20000 -OPT:alias=disjoint -LNO:prefetch=0

C++ benchmarks:

471.omnetpp: -Ofast -IPA:pu\_reorder=2 -CG:gcm=off -m32  
-L/data1/SmartHeap\_8smp/lib -lsmartheap\_smp

473.astar: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -Ofast  
-m32 -L/data1/SmartHeap\_8smp/lib -lsmartheap\_smp

483.xalancbmk: -Ofast -m32 -OPT:unroll\_times\_max=8  
-L/data1/SmartHeap\_8smp/lib -lsmartheap\_smp

## Peak Other Flags

C benchmarks:

-IPA:max\_jobs=4

C++ benchmarks:

-IPA:max\_jobs=4

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.27.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.27.html)



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems  
Sun Fire X4100 M2

SPECint\_rate2006 = 50.9

SPECint\_rate\_base2006 = 45.1

CPU2006 license: 6

Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Apr-2007

Hardware Availability: Oct-2006

Software Availability: Aug-2006

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.27.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.27.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 v1.0.  
Report generated on Tue Jul 22 11:31:26 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 1 May 2007.