



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems Sun Fire X4440

SPECint®_rate2006 = 117
SPECint_rate_base2006 = 99.2

CPU2006 license: 6

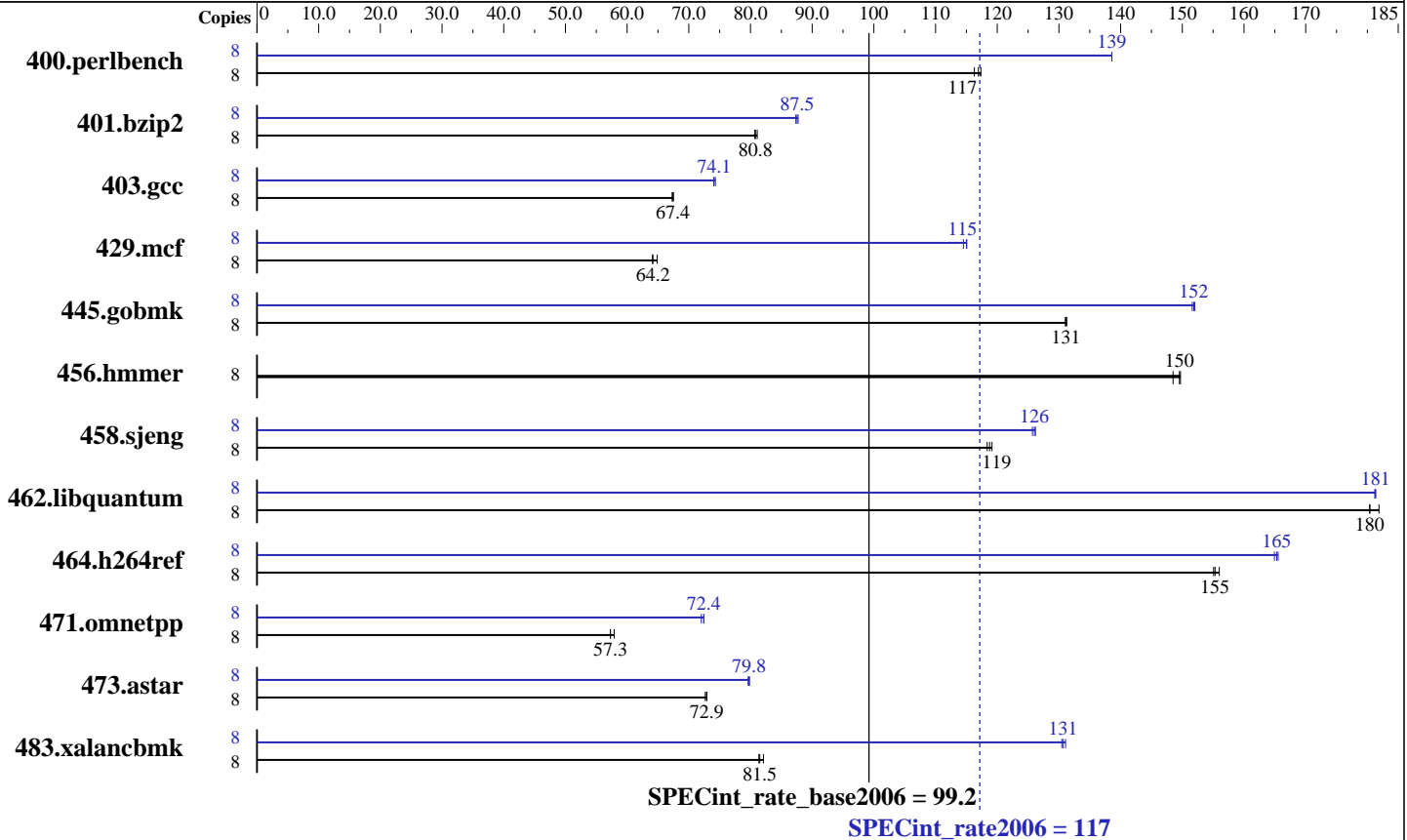
Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Jan-2008

Hardware Availability: Apr-2008

Software Availability: May-2008



Hardware

CPU Name: AMD Opteron 8224 SE
 CPU Characteristics: 3200
 CPU MHz: Integrated
 FPU: 8 cores, 4 chips, 2 cores/chip
 CPU(s) enabled: 4-8 (order by number of chips)
 CPU(s) orderable: 64 KB I + 64 KB D on chip per core
 Primary Cache: 1 MB I+D on chip per core
 Secondary Cache: None
 L3 Cache: None
 Other Cache: None
 Memory: 128 GB (32 x 4GB, DDR2-667 CL5 ECC Registered SDRAM)
 Disk Subsystem: SAS, 72 GB, 10 K RPM
 Other Hardware: None

Software

Operating System: Solaris 10 5/08
 Compiler: Sun Studio 12 (see patch information below)
 Auto Parallel: No
 File System: ufs
 System State: Default
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other Software: SmartHeap 7.4 32-bit Library for Solaris



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire X4440

SPECint_rate2006 = 117
SPECint_rate_base2006 = 99.2

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

Test date: Jan-2008
Hardware Availability: Apr-2008
Software Availability: May-2008

Results Table

Benchmark	Base						Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	666	117	668	117	672	116	8	564	139	564	139	564	139
401.bzip2	8	952	81.1	955	80.8	956	80.7	8	884	87.4	882	87.5	880	87.7
403.gcc	8	955	67.4	957	67.3	954	67.5	8	867	74.3	870	74.0	869	74.1
429.mcf	8	1137	64.2	1138	64.1	1125	64.9	8	634	115	637	115	634	115
445.gobmk	8	639	131	640	131	640	131	8	554	152	552	152	553	152
456.hammer	8	503	148	499	150	499	150	8	503	148	499	150	499	150
458.sjeng	8	815	119	818	118	812	119	8	770	126	768	126	767	126
462.libquantum	8	919	180	919	180	911	182	8	915	181	914	181	914	181
464.h264ref	8	1140	155	1142	155	1135	156	8	1073	165	1071	165	1070	166
471.omnetpp	8	873	57.3	873	57.3	864	57.9	8	694	72.0	690	72.4	690	72.4
473.astar	8	770	72.9	770	72.9	773	72.7	8	705	79.6	703	79.8	704	79.8
483.xalancbmk	8	677	81.5	678	81.4	672	82.1	8	421	131	422	131	423	130

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 124868-01, 127002-01, 124864-01

Operating System Notes

Processes were bound to cores using "submit" and "pbind".
'ulimit -s unlimited' used to set environment stack size

Platform Notes

Default BIOS settings were used.

Base Compiler Invocation

C benchmarks:
cc

C++ benchmarks:
CC



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire X4440

SPECint_rate2006 = 117
SPECint_rate_base2006 = 99.2

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

Test date: Jan-2008
Hardware Availability: Apr-2008
Software Availability: May-2008

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.hmmmer: -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=sse2a -m64
C++ benchmarks:
-fast -xipo=2 -xarch=sse2a -m64 -library=stlport4

Base Other Flags

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

Peak Compiler Invocation

C benchmarks:
cc
C++ benchmarks:
CC

Peak Portability Flags

400.perlbench: -DSPEC_CPU_SOLARIS_X64
403.gcc: -DSPEC_CPU_SOLARIS

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire X4440

SPECint_rate2006 = 117
SPECint_rate_base2006 = 99.2

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

Test date: Jan-2008
Hardware Availability: Apr-2008
Software Availability: May-2008

Peak Portability Flags (Continued)

456.hmmr: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_SOLARIS
483.xalancbmk: -DSPEC_CPU_SOLARIS

Peak Optimization Flags

C benchmarks:

400.perlbench: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xalias_level=std -xvector=simd -lbsdmalloc
-L/export/home/SmartHeap_7.4/lib -lsmarheap

401.bzip2: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -xarch=sse2
-m64 -xalias_level=strong -xpagesize=2m

403.gcc: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xalias_level=std -xprefetch_level=2

429.mcf: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xarch=sse2a -xalias_level=strict -xprefetch=no%auto
-lbsdmalloc

445.gobmk: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xarch=sse2a -m64
-xrestrict -xalias_level=strong -xdepend -xpagesize=2m
-lmvec

456.hmmr: basepeak = yes

458.sjeng: -fast -xarch=sse2a -m64 -xipo=2 -xprefetch=auto
-xprefetch_level=3 -xpagesize=2m -lmvec

462.libquantum: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xarch=sse2a -m64 -xunroll=8

464.h264ref: -fast -xarch=sse2a -m64 -xipo=2 -xvector -xunroll=8
-xalias_level=strong -xrestrict -xpagesize=2m -lmvec

C++ benchmarks:

471.omnetpp: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xprefetch_level=3 -xarch=sse2a -Qoption ube -fsimple=3
-L/export/home/SmartHeap_7.4/lib -lsmarheap

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire X4440

SPECint_rate2006 = 117
SPECint_rate_base2006 = 99.2

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

Test date: Jan-2008
Hardware Availability: Apr-2008
Software Availability: May-2008

Peak Optimization Flags (Continued)

471.omnetpp (continued):
-library=stlport4

473.astar: -fast -xipo=2 -L/export/home/SmartHeap_7.4/lib -lsmarheap
-library=stlport4

483.xalancbmk: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xarch=sse2a -xpagesize_stack=2m
-L/export/home/SmartHeap_7.4/lib -lsmarheap
-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.html>

You can also download the XML flags source by saving the following link:
<http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio-Opteron.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.

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 17:23:47 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 18 April 2008.