



# SPEC® CINT2006 Result

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## Sun Microsystems Sun Fire X4150

SPECint®\_rate2006 = 102

SPECint\_rate\_base2006 = 91.3

CPU2006 license: 6

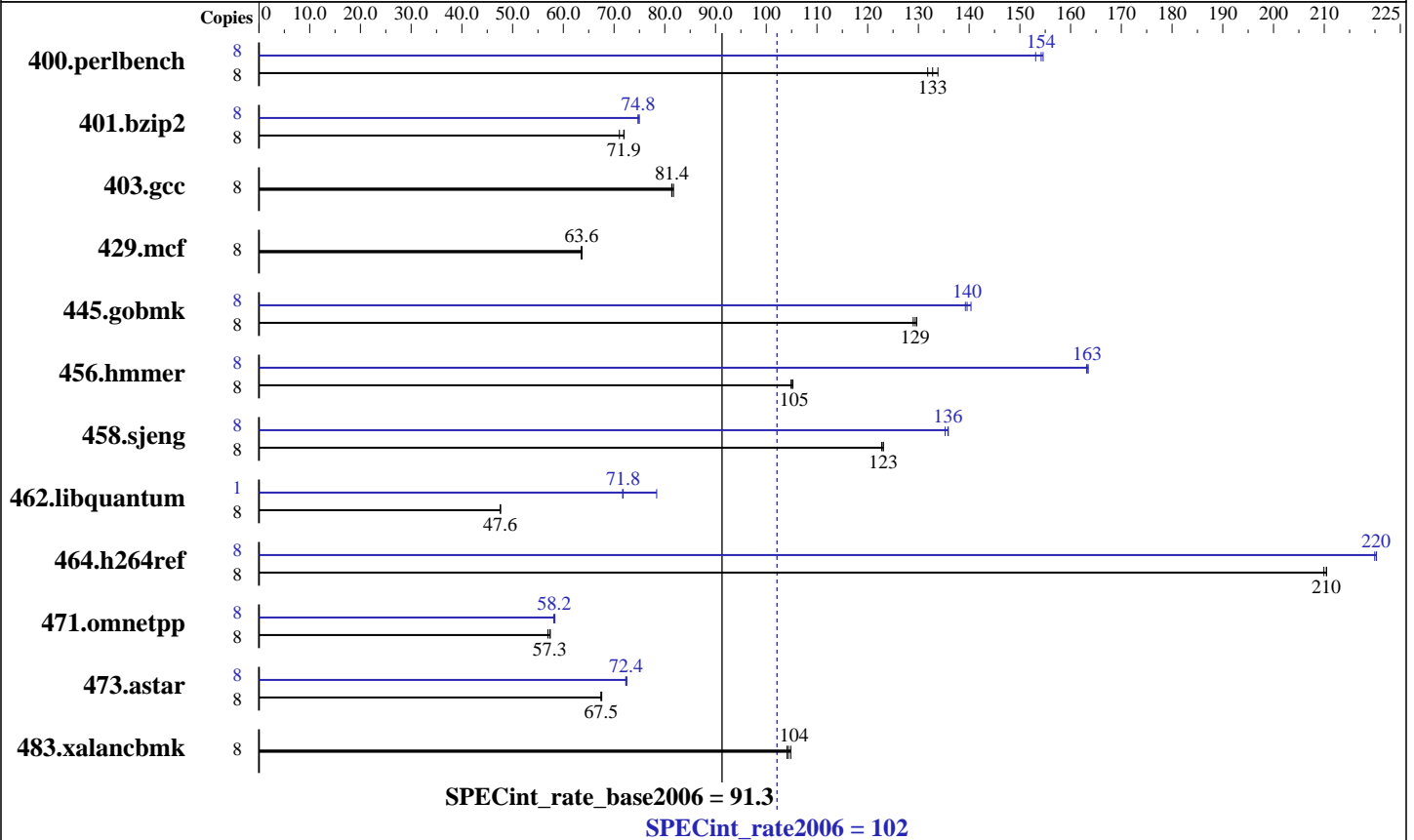
Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Oct-2007

Hardware Availability: Sep-2007

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon X5355  
 CPU Characteristics: Quad Core, 2.667 GHz  
 CPU MHz: 2667  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
 CPU(s) orderable: 1,2 (order by number of chips)  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8x2GB DDR2 PC2-5300F 2rank CAS 5-5-5 with ECC)  
 Disk Subsystem: SAS, 72 GB, 10K RPM  
 Other Hardware: None

### Software

Operating System: SUSE LINUX Enterprise Server 10 SP1 for x86\_64  
 Compiler: Intel C++ and Fortran Compiler for Linux32 and Linux64 version 10.1 Build 20070725  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Multi-user, run level 3  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: SmartHeap library V8.1 Binutils 2.17.50.0.15



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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	584	134	593	132	<b>589</b>	<b>133</b>	8	510	153	506	155	<b>507</b>	<b>154</b>
401.bzip2	8	1086	71.1	1072	72.0	<b>1074</b>	<b>71.9</b>	8	<b>1032</b>	<b>74.8</b>	1030	75.0	1033	74.7
403.gcc	8	792	81.4	<b>791</b>	<b>81.4</b>	788	81.7	8	792	81.4	<b>791</b>	<b>81.4</b>	788	81.7
429.mcf	8	<b>1147</b>	<b>63.6</b>	1149	63.5	1146	63.7	8	<b>1147</b>	<b>63.6</b>	1149	63.5	1146	63.7
445.gobmk	8	647	130	<b>649</b>	<b>129</b>	651	129	8	<b>601</b>	<b>140</b>	598	140	603	139
456.hmmmer	8	<b>710</b>	<b>105</b>	709	105	712	105	8	<b>457</b>	<b>163</b>	458	163	457	163
458.sjeng	8	789	123	<b>787</b>	<b>123</b>	786	123	8	712	136	716	135	<b>713</b>	<b>136</b>
462.libquantum	8	3483	47.6	3483	47.6	<b>3483</b>	<b>47.6</b>	1	289	71.7	264	78.4	<b>289</b>	<b>71.8</b>
464.h264ref	8	841	210	<b>841</b>	<b>210</b>	843	210	8	804	220	805	220	<b>804</b>	<b>220</b>
471.omnetpp	8	871	57.4	<b>872</b>	<b>57.3</b>	878	57.0	8	857	58.3	<b>858</b>	<b>58.2</b>	861	58.1
473.astar	8	<b>832</b>	<b>67.5</b>	833	67.4	831	67.6	8	<b>776</b>	<b>72.4</b>	777	72.3	774	72.5
483.xalancbmk	8	527	105	530	104	<b>529</b>	<b>104</b>	8	527	105	530	104	<b>529</b>	<b>104</b>

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

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited  
OMP\_NUM\_THREADS set to 8  
KMP\_STACKSIZE set to 64M  
KMP\_AFFINITY set to physical,0

## Platform Notes

BIOS configuration:  
Hardware Prefetch = Disable; Adjacent Sector Prefetch = Disable

## General Notes

All benchmarks were compiled in 32-bit mode except 401.bzip2  
and 456.hmmmer for peak were compiled in 64-bit mode

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc



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## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-fast -inline-calloc -opt-malloc-options=3  
C++ benchmarks:  
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc  
401.bzip2: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include  
456.hmmmer: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include  
C++ benchmarks:  
icpc

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmmer: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LINUX

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## Peak Portability Flags (Continued)

483.xalanbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias  
-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch

403.gcc: basepeak = yes

429.mcf: basepeak = yes

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo  
-no-prec-div -ansi-alias

456.hmmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll4 -Ob0 -prefetch  
-opt-streaming-stores always -vec-guard-write  
-opt-malloc-options=3 -parallel -par-runtime-control

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine  
-Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

483.xalanbmk: basepeak = yes



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## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

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

<http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.02.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.02.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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