



SPEC® CINT2006 Result

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Fujitsu Siemens Computers

SPECint®_rate2006 = 125

CELSIUS R650, Intel Xeon E5440 processor

SPECint_rate_base2006 = 106

CPU2006 license: 22

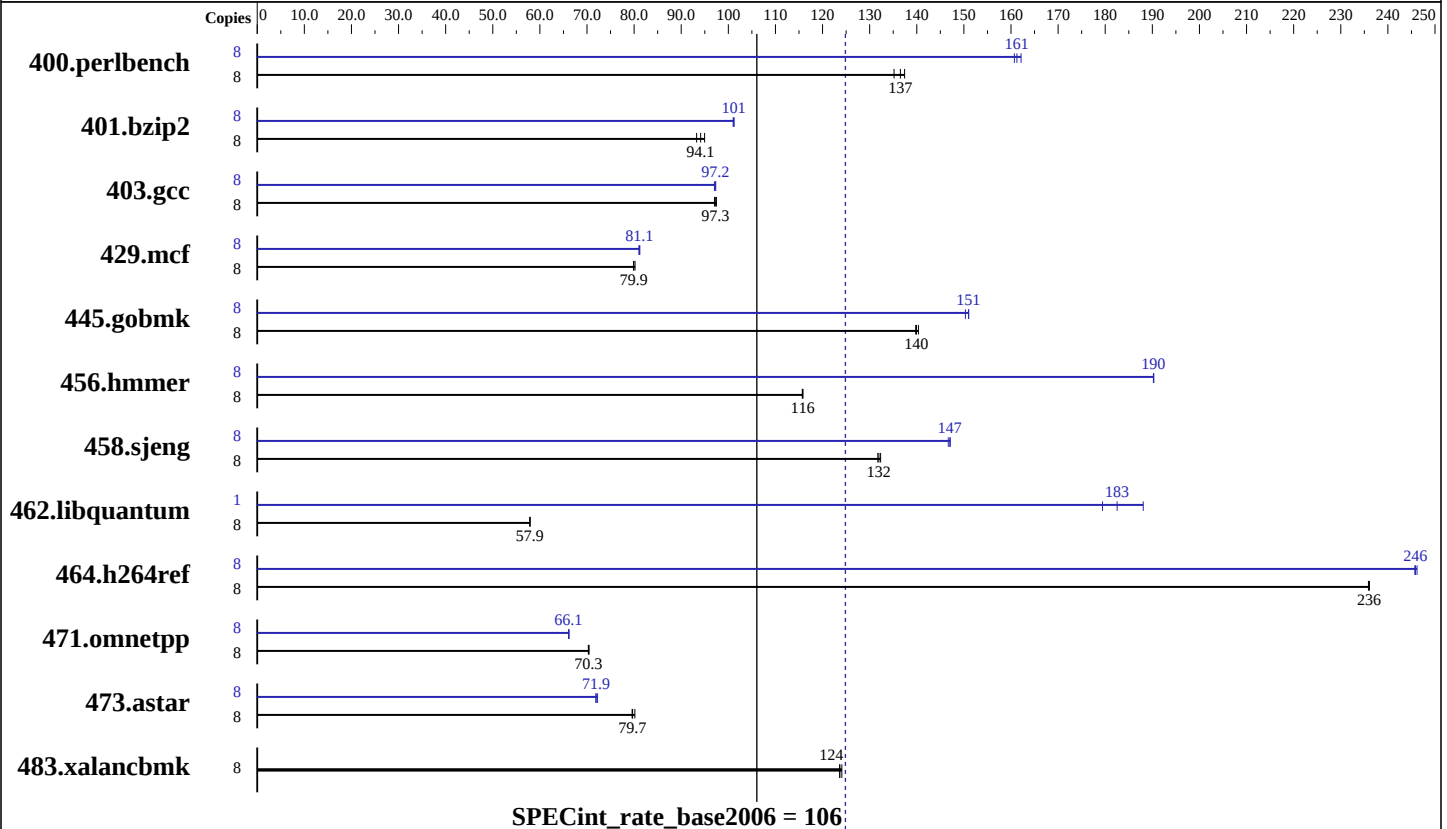
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Dec-2007

Hardware Availability: Nov-2007

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon E5440
CPU Characteristics:
CPU MHz: 2833
FPU: Integrated
CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
CPU(s) orderable: 1,2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache: None
Other Cache: None
Memory: 8 GB (8x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1 x 400 GB SATA II 7200 RPM
Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
Compiler: Intel C++ Compiler for Linux32 and Linux64, Version 10.1, Build 20070913
Auto Parallel: Yes
File System: ext3
System State: Multi-User, Run Level 3
Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: MicroQuill SmartHeap Library, Version 8.1
binutils-2.17.50.0.5-0.1.x86_64



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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	569	137	578	135	<u>573</u>	<u>137</u>	8	482	162	486	161	<u>485</u>	<u>161</u>
401.bzip2	8	813	95.0	828	93.3	<u>820</u>	<u>94.1</u>	8	763	101	<u>763</u>	<u>101</u>	764	101
403.gcc	8	664	97.1	<u>662</u>	<u>97.3</u>	661	97.5	8	<u>662</u>	<u>97.2</u>	664	97.0	662	97.3
429.mcf	8	913	79.9	<u>913</u>	<u>79.9</u>	910	80.2	8	900	81.0	898	81.2	<u>899</u>	<u>81.1</u>
445.gobmk	8	598	140	600	140	<u>600</u>	<u>140</u>	8	<u>556</u>	<u>151</u>	556	151	558	150
456.hmmer	8	<u>645</u>	<u>116</u>	644	116	645	116	8	392	190	<u>392</u>	<u>190</u>	392	190
458.sjeng	8	732	132	735	132	<u>734</u>	<u>132</u>	8	660	147	<u>658</u>	<u>147</u>	658	147
462.libquantum	8	<u>2864</u>	<u>57.9</u>	2863	57.9	2864	57.9	1	110	188	<u>114</u>	<u>183</u>	115	179
464.h264ref	8	750	236	751	236	<u>750</u>	<u>236</u>	8	720	246	719	246	<u>720</u>	<u>246</u>
471.omnetpp	8	710	70.4	<u>711</u>	<u>70.3</u>	711	70.3	8	<u>757</u>	<u>66.1</u>	755	66.2	757	66.1
473.astar	8	706	79.6	701	80.2	<u>705</u>	<u>79.7</u>	8	<u>781</u>	<u>71.9</u>	781	71.9	777	72.2
483.xalancbmk	8	446	124	445	124	<u>446</u>	<u>124</u>	8	446	124	445	124	<u>446</u>	<u>124</u>

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 prior to run
OMP_NUM_THREADS set to number of cores (default).

Platform Notes

BIOS configuration:
Enhanced Speedstep Technology = Disable
Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable
SnoopFilter = Enable

General Notes

All binaries were built with 32-bit Intel compiler except:
401.bzip2 and 456.hmmer in peak were built with 64-bit Intel
compiler by changing the path for include and library files.

For information about Fujitsu Siemens Computers please see:
<http://www.fujitsu-siemens.com>

Base Compiler Invocation

C benchmarks:
icc

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Base Compiler Invocation (Continued)

C++ benchmarks:
icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LITTLE_ENDIAN
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/opt/SmartHeap_8.1/lib -lsmartheap

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc

401.bzip2: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include

456.hmmer: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include

C++ benchmarks:
icpc



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Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LITTLE_ENDIAN
483.xalancbmk: -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: -fast -inline-calloc -opt-malloc-options=3
429.mcf: -fast -prefetch
445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo
-no-prec-div -ansi-alias
456.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive
458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4
462.libquantum: -fast -unroll4 -O0 -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
473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine
483.xalancbmk: basepeak = yes



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Peak Other Flags

Same as Base Other Flags

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.20080124.00.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.20080124.00.xml>

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For other inquiries, please contact webmaster@spec.org.

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