



SPEC[®] CINT2006 Result

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Fujitsu Siemens Computers

SPECint[®]2006 = 25.3

CELSIUS R550, Intel Xeon E5440 processor

SPECint_base2006 = 22.1

CPU2006 license: 22

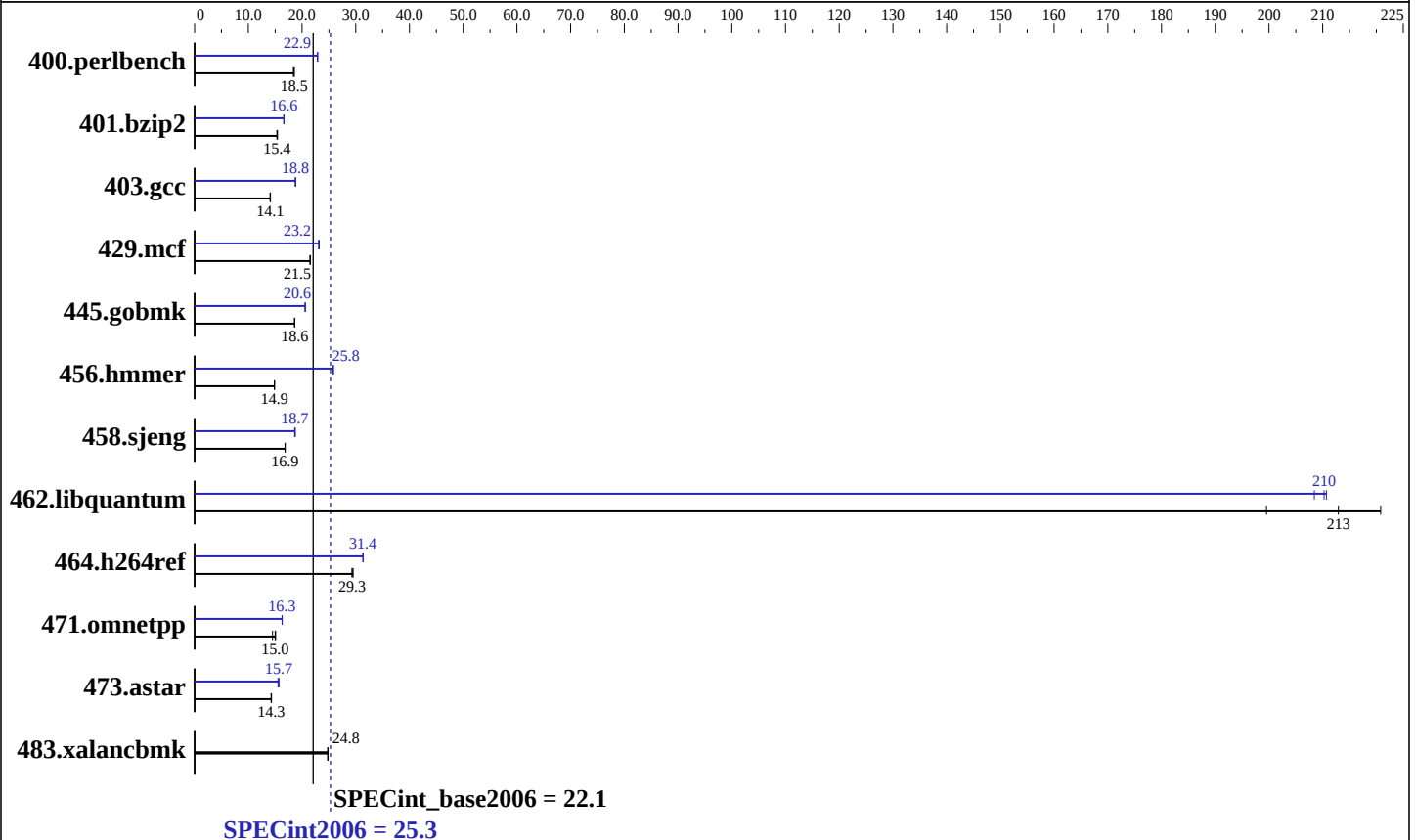
Test sponsor: Fujitsu Siemens Computers

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 (4x2 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<u>527</u>	<u>18.5</u>	527	18.5	531	18.4	428	22.8	<u>427</u>	<u>22.9</u>	426	22.9
401.bzip2	626	15.4	<u>627</u>	<u>15.4</u>	630	15.3	580	16.6	581	16.6	<u>580</u>	<u>16.6</u>
403.gcc	572	14.1	<u>572</u>	<u>14.1</u>	570	14.1	429	18.8	<u>428</u>	<u>18.8</u>	428	18.8
429.mcf	423	21.6	425	21.5	<u>424</u>	<u>21.5</u>	<u>394</u>	<u>23.2</u>	395	23.1	393	23.2
445.gobmk	563	18.6	<u>563</u>	<u>18.6</u>	563	18.6	510	20.6	<u>509</u>	<u>20.6</u>	509	20.6
456.hmmer	<u>628</u>	<u>14.9</u>	627	14.9	628	14.8	<u>361</u>	<u>25.8</u>	361	25.8	362	25.8
458.sjeng	719	16.8	<u>718</u>	<u>16.9</u>	717	16.9	650	18.6	<u>648</u>	<u>18.7</u>	645	18.7
462.libquantum	104	200	<u>97.3</u>	<u>213</u>	93.8	221	99.4	208	98.3	211	<u>98.5</u>	<u>210</u>
464.h264ref	755	29.3	<u>755</u>	<u>29.3</u>	750	29.5	705	31.4	706	31.4	<u>706</u>	<u>31.4</u>
471.omnetpp	431	14.5	<u>417</u>	<u>15.0</u>	414	15.1	383	16.3	<u>384</u>	<u>16.3</u>	384	16.3
473.astar	493	14.2	<u>492</u>	<u>14.3</u>	490	14.3	447	15.7	452	15.5	<u>448</u>	<u>15.7</u>
483.xalancbmk	<u>278</u>	<u>24.8</u>	278	24.8	278	24.8	<u>278</u>	<u>24.8</u>	278	24.8	278	24.8

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 = Enable, Adjacent Sector Prefetch = Enable
SnoopFilter = Disable

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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info@spec.org
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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 -vec-guard-write -parallel -par-runtime-control

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
-auto-ilp32
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
-auto-ilp32
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/opt/SmartHeap_8.1/lib -lsmarheap
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/opt/SmartHeap_8.1/lib -lsmarheap
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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