



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/120Lj
(Intel Xeon X5450)

SPECint®_rate2006 = 69.7

SPECint_rate_base2006 = 58.9

CPU2006 license: 9006

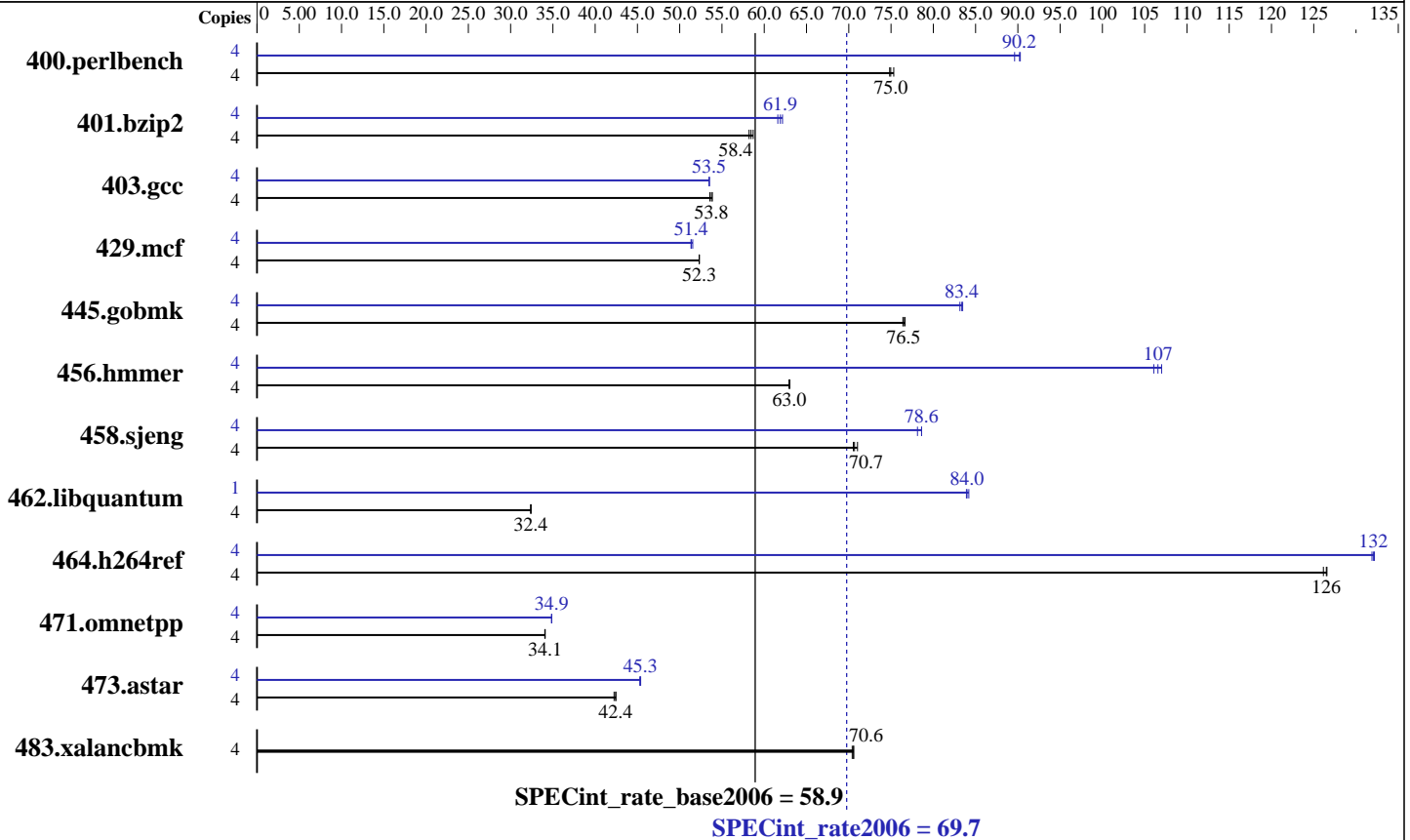
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jun-2008

Hardware Availability: Apr-2008

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X5450
 CPU Characteristics: 3.00 GHz, 2x6 MB L2 shared, 1333 MHz bus
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 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: 16 GB (8x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
 Disk Subsystem: 1x73.2 GB SAS, 15000RPM
 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 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008
 Auto Parallel: Yes
 File System: ReiserFS
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: MicroQuill SmartHeap library 8.1 binutils 2.17



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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	4	519	75.3	522	74.8	<u>521</u>	<u>75.0</u>	4	<u>433</u>	<u>90.2</u>	436	89.6	433	90.3
401.bzip2	4	<u>661</u>	<u>58.4</u>	658	58.7	663	58.2	4	627	61.6	621	62.2	<u>624</u>	<u>61.9</u>
403.gcc	4	<u>599</u>	<u>53.8</u>	601	53.6	598	53.9	4	602	53.5	<u>602</u>	<u>53.5</u>	602	53.5
429.mcf	4	<u>697</u>	<u>52.3</u>	697	52.3	698	52.3	4	708	51.5	710	51.4	<u>710</u>	<u>51.4</u>
445.gobmk	4	547	76.6	<u>549</u>	<u>76.5</u>	549	76.4	4	505	83.1	<u>503</u>	<u>83.4</u>	503	83.5
456.hmmer	4	593	62.9	<u>593</u>	<u>63.0</u>	592	63.0	4	349	107	352	106	<u>350</u>	<u>107</u>
458.sjeng	4	<u>685</u>	<u>70.7</u>	686	70.5	681	71.0	4	616	78.6	<u>616</u>	<u>78.6</u>	620	78.1
462.libquantum	4	2559	32.4	<u>2559</u>	<u>32.4</u>	2557	32.4	1	247	83.9	<u>247</u>	<u>84.0</u>	246	84.2
464.h264ref	4	699	127	702	126	<u>700</u>	<u>126</u>	4	671	132	670	132	<u>670</u>	<u>132</u>
471.omnetpp	4	734	34.0	<u>734</u>	<u>34.1</u>	733	34.1	4	<u>717</u>	<u>34.9</u>	718	34.8	717	34.9
473.astar	4	<u>662</u>	<u>42.4</u>	665	42.2	662	42.4	4	<u>619</u>	<u>45.3</u>	619	45.4	620	45.3
483.xalancbmk	4	391	70.6	<u>391</u>	<u>70.6</u>	392	70.4	4	391	70.6	<u>391</u>	<u>70.6</u>	392	70.4

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

Platform Notes

Bios settings:
Hardware Prefetcher: Enabled
Adjacent Cache Line Prefetch: Disabled
Intel SpeedStep Technology: Disabled

General Notes

All benchmarks compiled in 32-bit mode except 401.bzip2, 456.hmmer, for peak, are compiled in 64-bit mode

The NEC Express5800/120Lj(Intel Xeon X5450) and the Bull NovaScale T860 E1(Intel Xeon X5450,3.00GHz) models are electronically equivalent. The results have been measured on a NEC Express5800/120Lj(Intel Xeon X5450) model.

Base Compiler Invocation

C benchmarks:
icc

Continued on next page



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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
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
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 -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

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/NEC-Intel-ic10.1-INT-ia32-linux-flags.html>

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

<http://www.spec.org/cpu2006/flags/NEC-Intel-ic10.1-INT-ia32-linux-flags.xml>

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

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