SPEC® CINT2006 Result

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NEC Corporation

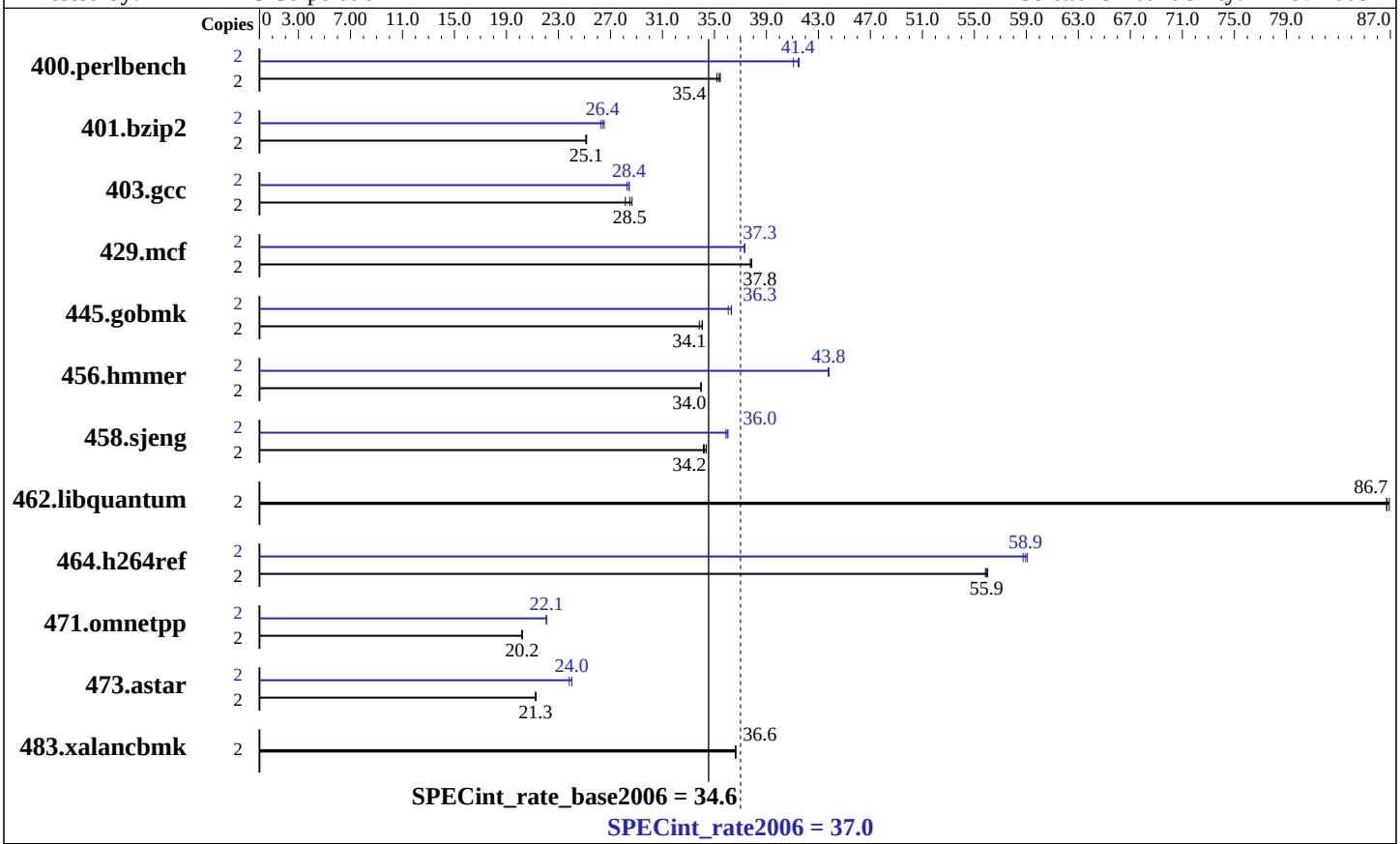
Express5800/R110a-1H
(Intel Core 2 Duo T9400)

SPECint®_rate2006 = 37.0

SPECint_rate_base2006 = 34.6

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Feb-2009
Hardware Availability: Jan-2009
Software Availability: Nov-2008



Hardware

CPU Name:	Intel Core 2 Duo T9400
CPU Characteristics:	1066 MHz system bus
CPU MHz:	2533
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	6 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	8 GB (4x2 GB PC2-5300P, 1 rank, CL5-5-5, ECC)
Disk Subsystem:	1x160 GB SATAII, 7200 RPM
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP2, Kernel 2.6.16.60-0.21-smp
Compiler:	Intel C++ Compiler 11.0 for Linux Build 20081105 Package ID: l_cproc_p_11.0.074
Auto Parallel:	No
File System:	ext2
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	MicroQuill SmartHeap Library 8.1 Binutils 2.18.50.0.7.20080502

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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	2	555	35.2	551	35.5	**553**	**35.4**	2	**472**	**41.4**	471	41.5	476	41.1
401.bzip2	2	769	25.1	767	25.2	**767**	**25.1**	2	735	26.2	728	26.5	**731**	**26.4**
403.gcc	2	**565**	**28.5**	572	28.2	562	28.7	2	566	28.4	**566**	**28.4**	570	28.3
429.mcf	2	483	37.8	**482**	**37.8**	482	37.9	2	489	37.3	489	37.3	**489**	**37.3**
445.gobmk	2	**616**	**34.1**	616	34.1	620	33.8	2	**578**	**36.3**	578	36.3	582	36.1
456.hmmer	2	549	34.0	549	34.0	**549**	**34.0**	2	426	43.8	**426**	**43.8**	426	43.8
458.sjeng	2	704	34.4	709	34.2	**707**	**34.2**	2	**672**	**36.0**	675	35.9	671	36.0
462.libquantum	2	478	86.7	**478**	**86.7**	477	86.9	2	478	86.7	**478**	**86.7**	477	86.9
464.h264ref	2	790	56.0	792	55.8	**791**	**55.9**	2	**751**	**58.9**	749	59.1	753	58.7
471.omnetpp	2	619	20.2	**619**	**20.2**	619	20.2	2	566	22.1	566	22.1	**566**	**22.1**
473.astar	2	660	21.3	**661**	**21.3**	661	21.2	2	589	23.8	**584**	**24.0**	584	24.0
483.xalancbmk	2	**377**	**36.6**	377	36.6	377	36.6	2	**377**	**36.6**	377	36.6	377	36.6

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

Submit Notes

```
The config file option 'submit' was used.
 taskset was used to bind processes to cores
```

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
```

Platform Notes

```
Bios settings:
Hardware Prefetcher:                Enabled
Adjacent Cache Line Prefetch:       Enabled
```

Base Compiler Invocation

C benchmarks:
icc

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:
-xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc
-opt-malloc-options=3 -opt-prefetch

C++ benchmarks:
-xSSE4.1 -ipo -O3 -no-prec-div -opt-prefetch -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/Compiler/11.0/074/bin/intel64/icc
-L/opt/intel/Compiler/11.0/074/ipp/em64t/lib
-I/opt/intel/Compiler/11.0/074/ipp/em64t/include

456.hmmer: /opt/intel/Compiler/11.0/074/bin/intel64/icc
-L/opt/intel/Compiler/11.0/074/ipp/em64t/lib
-I/opt/intel/Compiler/11.0/074/ipp/em64t/include

C++ benchmarks:
icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64

Continued on next page

Peak Portability Flags (Continued)

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) -xSSE4.1 -ipo -O3 -no-prec-div -static -ansi-alias -opt-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

403.gcc: -xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc -opt-malloc-options=3

429.mcf: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -O2 -ipo -no-prec-div -ansi-alias

456.hmmer: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll4

462.libquantum: basepeak = yes

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/opt/SmartHeap_8.1/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs -L/opt/SmartHeap_8.1/lib -lsmartheap

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

The flags files that were used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revE.html`
`http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revB.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revE.xml`
`http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revB.xml`

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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