



# SPEC® CINT2006 Result

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NTT System S. A.  
NTT Business W 986G

SPECint®\_rate2006 = 44.8

SPECint\_rate\_base2006 = 41.7

CPU2006 license: 9013

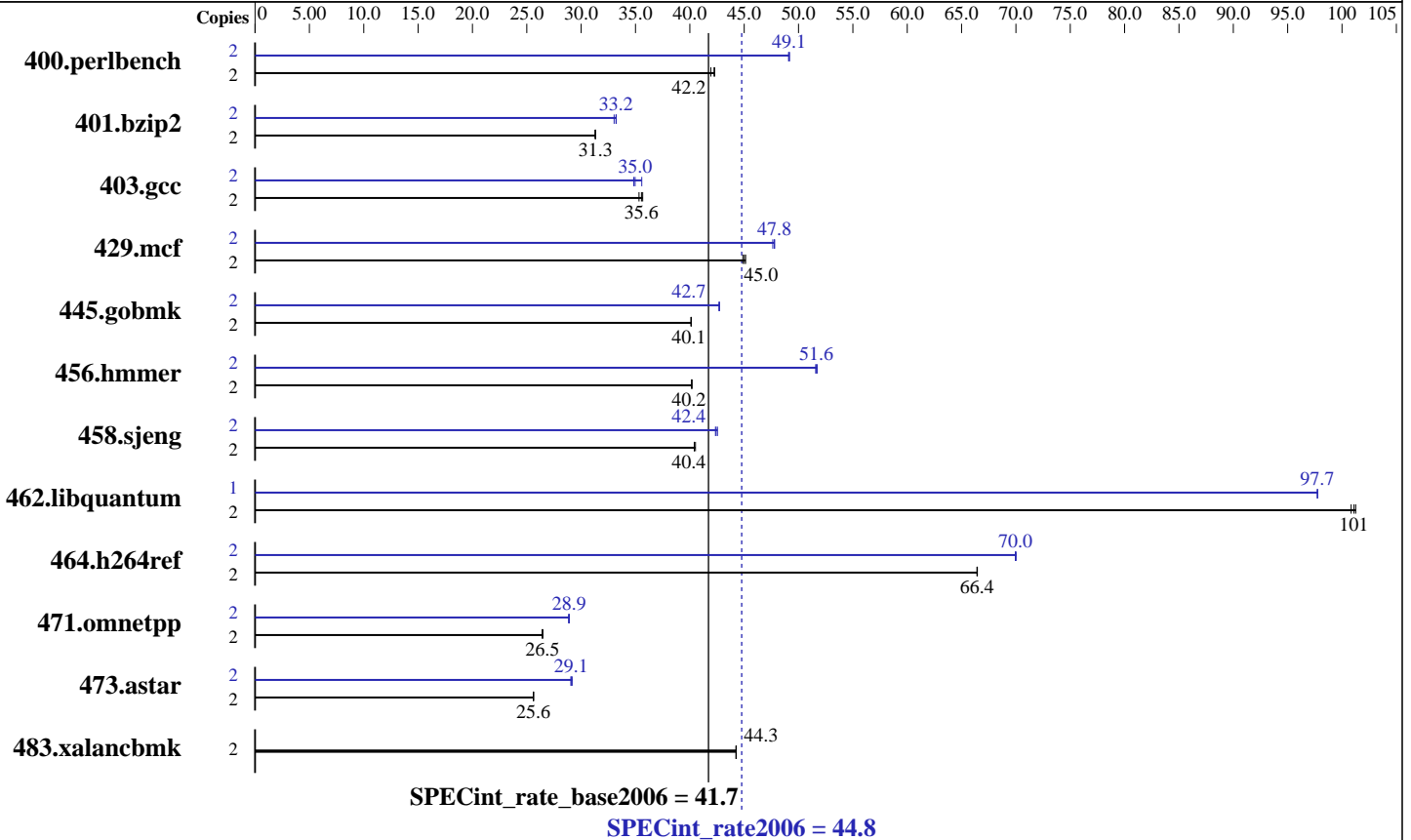
Test sponsor: NTT System S. A.

Tested by: NTT System S. A.

Test date: Nov-2008

Hardware Availability: Nov-2008

Software Availability: Nov-2008



## Hardware

CPU Name: Intel Core 2 Duo E8400  
 CPU Characteristics:  
 CPU MHz: 3000  
 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: 2 GB (2x1GB)  
 Disk Subsystem: 250 GB SATA, 7200RPM  
 Other Hardware: None

## Software

Operating System: SuSe Linux SLES10 SP1, Kernel 2.6.16.60-0-21-smp  
 Compiler: Intel C++ Compiler 11.0 for Linux  
 Build 20080930 Package ID: l\_cproc\_p\_11.0.066  
 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 V8.1  
 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	466	41.9	<b>463</b>	<b>42.2</b>	462	42.3	2	398	49.1	<b>398</b>	<b>49.1</b>	397	49.2
401.bzip2	2	617	31.3	616	31.3	<b>616</b>	<b>31.3</b>	2	584	33.0	581	33.2	<b>581</b>	<b>33.2</b>
403.gcc	2	<b>453</b>	<b>35.6</b>	451	35.7	456	35.3	2	<b>460</b>	<b>35.0</b>	453	35.6	462	34.8
429.mcf	2	406	44.9	404	45.1	<b>405</b>	<b>45.0</b>	2	382	47.8	383	47.6	<b>382</b>	<b>47.8</b>
445.gobmk	2	523	40.1	<b>523</b>	<b>40.1</b>	523	40.1	2	<b>491</b>	<b>42.7</b>	491	42.7	491	42.7
456.hammer	2	<b>464</b>	<b>40.2</b>	465	40.2	464	40.2	2	362	51.6	361	51.7	<b>361</b>	<b>51.6</b>
458.sjeng	2	<b>599</b>	<b>40.4</b>	597	40.5	599	40.4	2	571	42.4	<b>571</b>	<b>42.4</b>	569	42.5
462.libquantum	2	<b>410</b>	<b>101</b>	411	101	409	101	1	212	97.7	212	97.7	<b>212</b>	<b>97.7</b>
464.h264ref	2	<b>666</b>	<b>66.4</b>	666	66.5	666	66.4	2	633	69.9	<b>633</b>	<b>70.0</b>	632	70.0
471.omnetpp	2	<b>473</b>	<b>26.5</b>	472	26.5	473	26.4	2	<b>433</b>	<b>28.9</b>	433	28.8	432	28.9
473.astar	2	548	25.6	<b>548</b>	<b>25.6</b>	548	25.6	2	<b>483</b>	<b>29.1</b>	483	29.1	481	29.2
483.xalancbmk	2	312	44.2	<b>312</b>	<b>44.3</b>	312	44.3	2	312	44.2	<b>312</b>	<b>44.3</b>	312	44.3

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 except  
for 462.libquantum peak  
OMP\_NUM\_THREADS set to number of processors  
KMP\_AFFINITY set to "physical,0"  
KMP\_STACKSIZE set to 64M

## 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



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## 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/spec/cpu2006.1.1/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/11.0/066/bin/intel64/icc

456.hmmer: /opt/intel/Compiler/11.0/066/bin/intel64/icc

C++ benchmarks:

icpc

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

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## Peak Optimization Flags (Continued)

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: -xSSE4.1 -ipo -O3 -no-prec-div -static  
-opt-malloc-options=3 -parallel -par-runtime-control  
-opt-prefetch

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/spec/cpu2006.1.1/lib -lsmarheap

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/spec/cpu2006.1.1/lib -lsmarheap

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-Linux64-Platform.20090710.html>

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090710.01.html>



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You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090710.xml>

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090710.01.xml>

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

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