



# SPEC® CINT2006 Result

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## IBM Corporation

### SPECint®\_rate2006 = 103

## IBM System x3650 (Intel Xeon X5365)

### SPECint\_rate\_base2006 = 96.4

CPU2006 license: 11

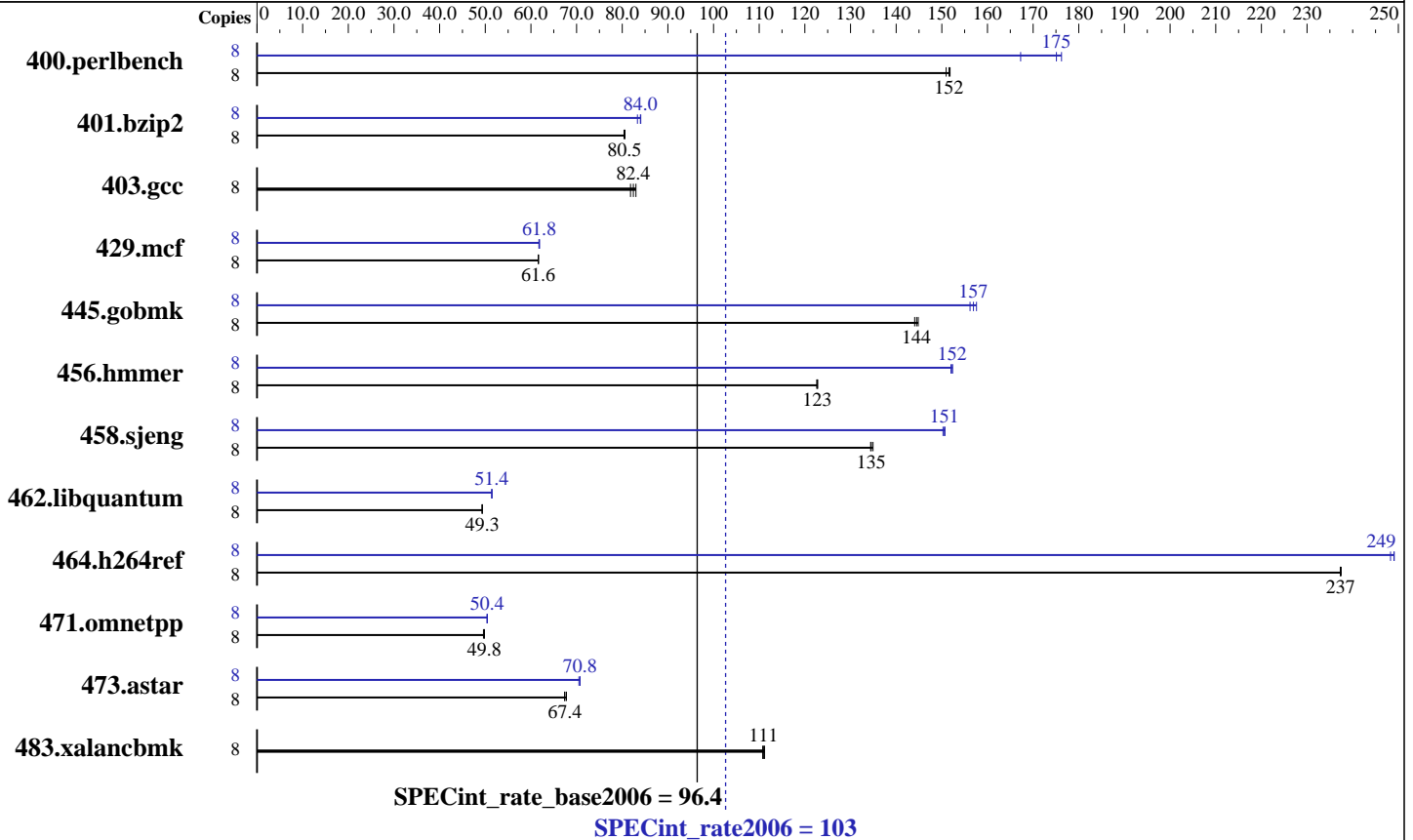
Test date: Aug-2007

Test sponsor: IBM Corporation

Hardware Availability: Sep-2007

Tested by: IBM Corporation

Software Availability: Jul-2007



### Hardware

CPU Name: Intel Xeon X5365  
 CPU Characteristics: 1333MHz system bus  
 CPU MHz: 3000  
 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: 8 MB I+D on chip per chip, 4 MB shared / 2 cores  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8 x 2 GB DDR2-5300F ECC)  
 Disk Subsystem: 1 x 36 GB SAS, 15000 RPM  
 Other Hardware: None

### Software

Operating System: SLES 10 (x86\_64), 2.6.16.21-0.8-smp  
 Compiler: Intel C++ Compiler for Linux version 10.0  
 Build 20070426 Package ID: 1\_cc\_p\_10.0.023  
 Auto Parallel: No  
 File System: ReiserFS  
 System State: Multi-user, run level 3  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: MicroQuill SmartHeap 8.1



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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	515	152	518	151	<b>516</b>	<b>152</b>	8	<b>446</b>	<b>175</b>	467	167	444	176
401.bzip2	8	<b>959</b>	<b>80.5</b>	960	80.4	958	80.6	8	926	83.3	<b>919</b>	<b>84.0</b>	918	84.1
403.gcc	8	<b>781</b>	<b>82.4</b>	787	81.8	776	83.0	8	<b>781</b>	<b>82.4</b>	787	81.8	776	83.0
429.mcf	8	1183	61.6	<b>1184</b>	<b>61.6</b>	1184	61.6	8	1179	61.9	<b>1180</b>	<b>61.8</b>	1182	61.7
445.gobmk	8	<b>581</b>	<b>144</b>	579	145	583	144	8	<b>535</b>	<b>157</b>	537	156	533	158
456.hammer	8	608	123	<b>608</b>	<b>123</b>	609	123	8	490	152	<b>490</b>	<b>152</b>	491	152
458.sjeng	8	<b>719</b>	<b>135</b>	720	134	717	135	8	<b>643</b>	<b>151</b>	644	150	642	151
462.libquantum	8	3360	49.3	<b>3360</b>	<b>49.3</b>	3361	49.3	8	3221	51.5	3223	51.4	<b>3223</b>	<b>51.4</b>
464.h264ref	8	<b>746</b>	<b>237</b>	746	237	746	237	8	<b>711</b>	<b>249</b>	713	248	711	249
471.omnetpp	8	1004	49.8	<b>1005</b>	<b>49.8</b>	1008	49.6	8	991	50.4	992	50.4	<b>992</b>	<b>50.4</b>
473.astar	8	833	67.4	829	67.8	<b>833</b>	<b>67.4</b>	8	794	70.8	796	70.5	<b>794</b>	<b>70.8</b>
483.xalancbmk	8	<b>497</b>	<b>111</b>	496	111	498	111	8	<b>497</b>	<b>111</b>	496	111	498	111

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

## General Notes

taskset utility used to bind CPU(s) to processes

## 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:

-fast

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## Base Optimization Flags (Continued)

C++ benchmarks:

```
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/spec/cpu2006.1.0/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/10.0.023/bin/icc
-L/opt/intel/cce/10.0.023/lib
-I/opt/intel/cce/10.0.023/include
```

```
456.hmmer: /opt/intel/cce/10.0.023/bin/icc
-L/opt/intel/cce/10.0.023/lib
-I/opt/intel/cce/10.0.023/include
```

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) -fast -ansi-alias
-prefetch
```

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## Peak Optimization Flags (Continued)

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast

403.gcc: basepeak = yes

429.mcf: -fast -prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo  
-no-prec\_div -ansi-alias

456.hmmer: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -Ob0  
-prefetch -opt-streaming-stores always

464.h264ref: Same as 456.hmmer

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec\_div -ansi-alias -Wl,-z,muldefs  
-L/spec/cpu2006.1.0/lib -lsmartheap

473.astar: Same as 471.omnetpp

483.xalancbmk: basepeak = yes

## 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/Intel-ic10-ia32-intel64-linux-flags.20090714.45.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.20090714.45.xml>



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

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