



# SPEC® CINT2006 Result

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**IBM Corporation**

**SPECint®\_rate2006 = Not Run**

IBM BladeCenter HS21 (Intel Xeon X5460)

**SPECint\_rate\_base2006 = 112**

**CPU2006 license:** 11

**Test sponsor:** IBM Corporation

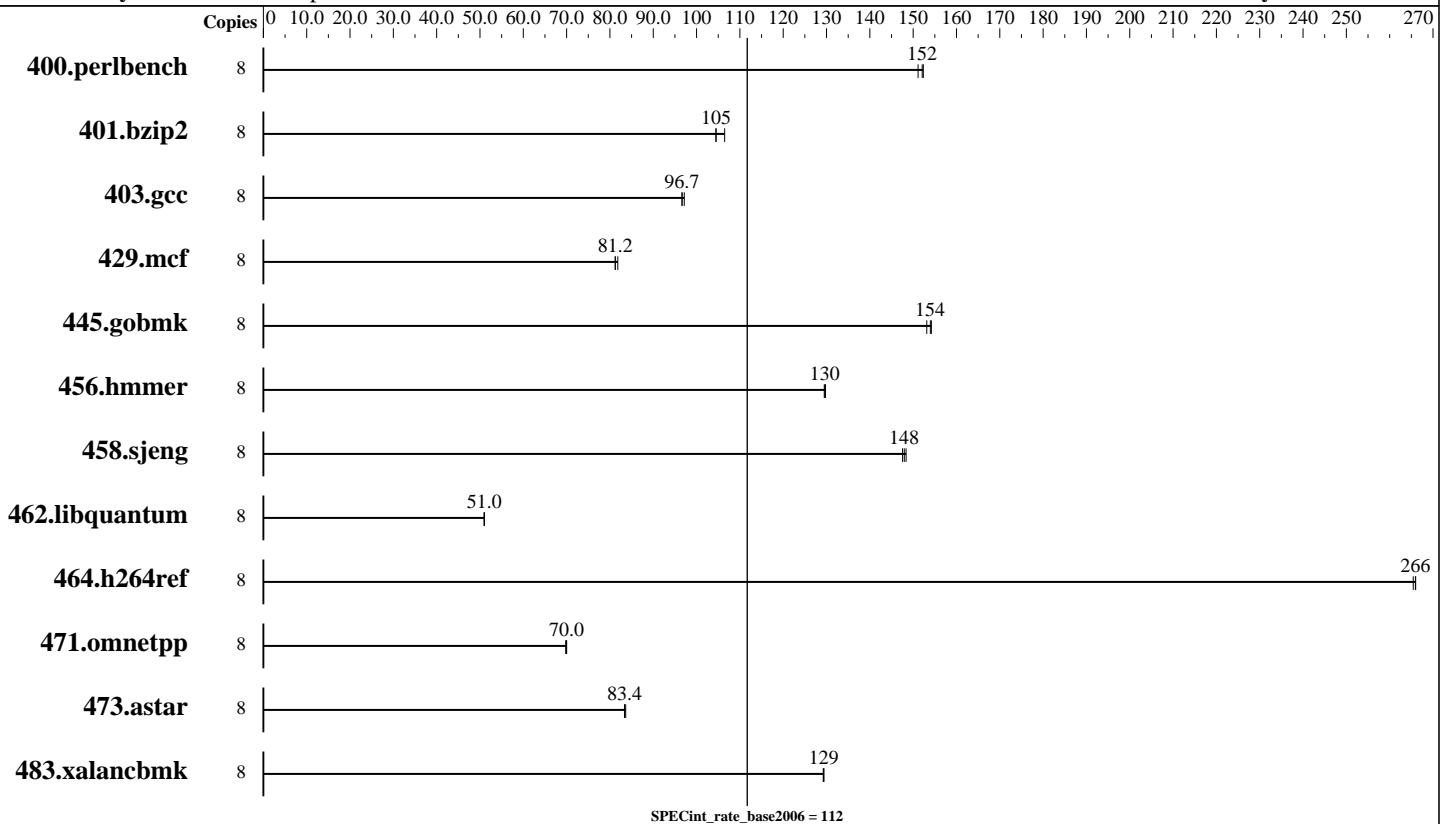
**Tested by:** IBM Corporation

**Test date:**

Nov-2007

**Hardware Availability:** Jan-2008

**Software Availability:** Nov-2007



## Hardware

CPU Name: Intel Xeon X5460  
CPU Characteristics: 1333MHz system bus  
CPU MHz: 3158  
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: 16 GB (8 x 2 GB DDR2-5300F ECC)  
Disk Subsystem: 1 x 36 GB SAS, 10000 RPM  
Other Hardware: Memory and I/O Expansion Unit (P/N 42C1600)

## Software

Operating System: SLES10 (x86\_64), 2.6.16.21-0.8-smp  
Compiler: Intel C++ Compiler 10.1 for Linux  
Build 20070913 Package ID: l\_cc\_p\_10.1.008  
Auto Parallel: No  
File System: ReiserFS  
System State: Multi-user, run level 3  
Base Pointers: 32-bit  
Peak Pointers: Not Applicable  
Other Software: MicroQuill SmartHeap 8.1  
Binutils 2.17.50.0.15



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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      | <b>514</b> | <b>152</b>  | 517        | 151         | 513         | 152         |        |         |       |         |       |         |       |
| 401.bzip2      | 8      | <b>739</b> | <b>105</b>  | 725        | 106         | 739         | 104         |        |         |       |         |       |         |       |
| 403.gcc        | 8      | 663        | 97.2        | 666        | 96.6        | <b>666</b>  | <b>96.7</b> |        |         |       |         |       |         |       |
| 429.mcf        | 8      | 898        | 81.2        | <b>898</b> | <b>81.2</b> | 892         | 81.8        |        |         |       |         |       |         |       |
| 445.gobmk      | 8      | <b>545</b> | <b>154</b>  | 548        | 153         | 544         | 154         |        |         |       |         |       |         |       |
| 456.hmmer      | 8      | <b>576</b> | <b>130</b>  | 576        | 129         | 575         | 130         |        |         |       |         |       |         |       |
| 458.sjeng      | 8      | 652        | 148         | <b>654</b> | <b>148</b>  | 656         | 148         |        |         |       |         |       |         |       |
| 462.libquantum | 8      | 3250       | 51.0        | 3251       | 51.0        | <b>3251</b> | <b>51.0</b> |        |         |       |         |       |         |       |
| 464.h264ref    | 8      | <b>666</b> | <b>266</b>  | 667        | 265         | 666         | 266         |        |         |       |         |       |         |       |
| 471.omnetpp    | 8      | <b>715</b> | <b>70.0</b> | 717        | 69.8        | 714         | 70.0        |        |         |       |         |       |         |       |
| 473.astar      | 8      | 674        | 83.4        | <b>673</b> | <b>83.4</b> | 671         | 83.6        |        |         |       |         |       |         |       |
| 483.xalancbmk  | 8      | 427        | 129         | 427        | 129         | <b>427</b>  | <b>129</b>  |        |         |       |         |       |         |       |

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

## General Notes

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

Hardware Sector Prefetch Disabled and Adjacent Sector Prefetch Disabled

OMP\_NUM\_THREADS set to number of cores

KMP\_AFFINITY set to physical,0

KMP\_STACKSIZE set to 64M

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



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## Base Optimization Flags

C benchmarks:

```
-fast -inline-calloc -opt-malloc-options=3
```

C++ benchmarks:

```
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs  
-L/spec/users/rahul/cpu2006.1.0/lib -lsmartheap
```

## Base 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.20090714.31.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.20090714.31.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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