



SPEC® CINT2006 Result

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IBM Corporation

SPECint®_rate2006 = 82.8

IBM BladeCenter HS21 XM (Intel Xeon E5335)

SPECint_rate_base2006 = 77.4

CPU2006 license: 11

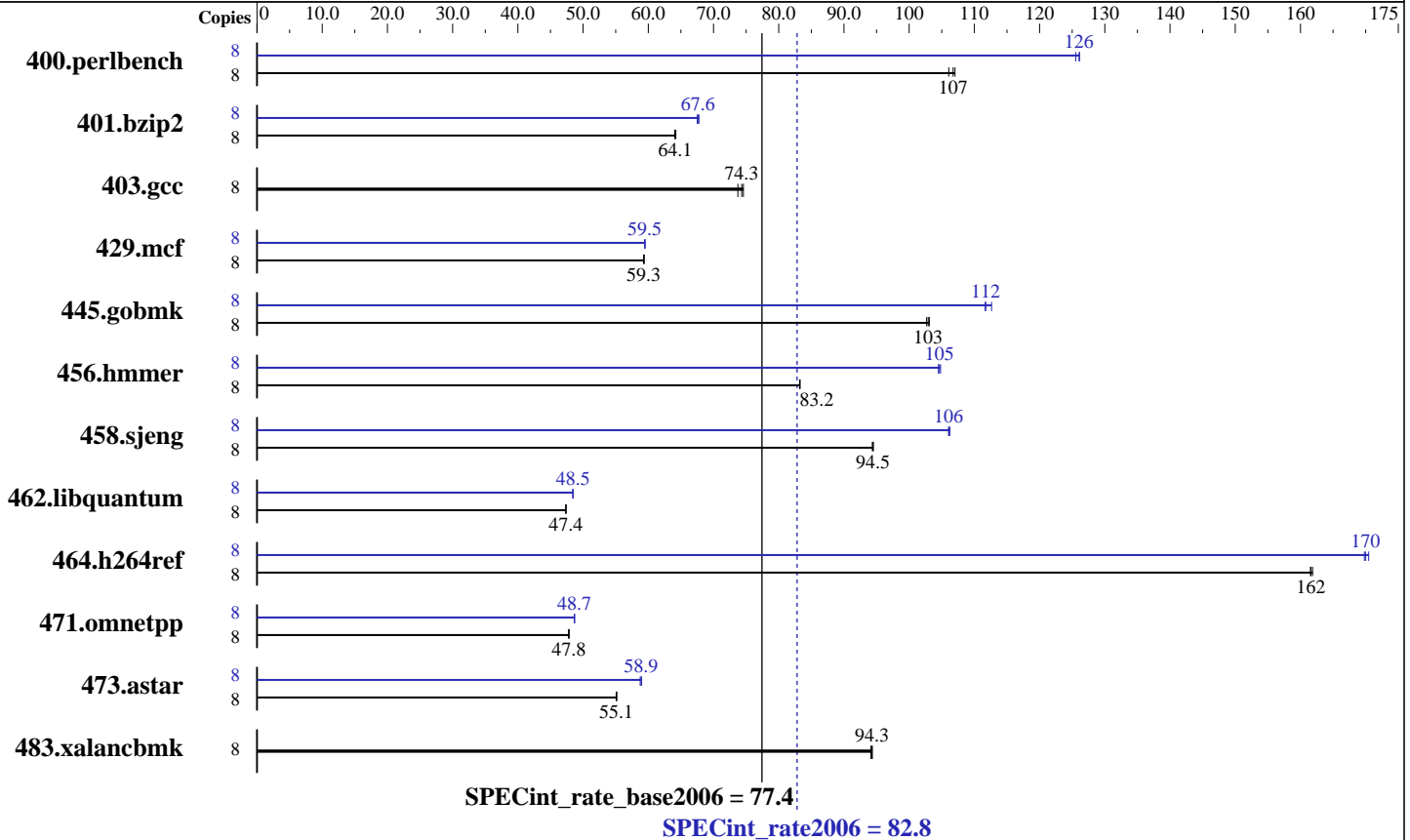
Test date: Jul-2007

Test sponsor: IBM Corporation

Hardware Availability: Feb-2007

Tested by: IBM Corporation

Software Availability: Jul-2007



Hardware

CPU Name: Intel Xeon E5335
 CPU Characteristics: 1333MHz system bus
 CPU MHz: 2000
 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 2GB DDR2-5300F ECC)
 Disk Subsystem: 1 x 36 GB SAS, 10000 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	<u>732</u>	<u>107</u>	730	107	737	106	8	623	126	<u>620</u>	<u>126</u>	620	126
401.bzip2	8	1202	64.2	1205	64.1	<u>1204</u>	<u>64.1</u>	8	1139	67.8	1144	67.5	<u>1142</u>	<u>67.6</u>
403.gcc	8	863	74.6	<u>866</u>	<u>74.3</u>	873	73.7	8	863	74.6	<u>866</u>	<u>74.3</u>	873	73.7
429.mcf	8	<u>1230</u>	<u>59.3</u>	1230	59.3	1229	59.4	8	1227	59.5	<u>1227</u>	<u>59.5</u>	1226	59.5
445.gobmk	8	817	103	814	103	<u>815</u>	<u>103</u>	8	745	113	752	112	<u>751</u>	<u>112</u>
456.hammer	8	<u>897</u>	<u>83.2</u>	896	83.3	897	83.2	8	714	104	712	105	<u>713</u>	<u>105</u>
458.sjeng	8	1026	94.3	1024	94.5	<u>1025</u>	<u>94.5</u>	8	<u>913</u>	<u>106</u>	913	106	911	106
462.libquantum	8	3500	47.4	<u>3499</u>	<u>47.4</u>	3499	47.4	8	3422	48.4	<u>3421</u>	<u>48.5</u>	3421	48.5
464.h264ref	8	<u>1095</u>	<u>162</u>	1096	162	1094	162	8	1039	170	1043	170	<u>1041</u>	<u>170</u>
471.omnetpp	8	1046	47.8	<u>1046</u>	<u>47.8</u>	1045	47.9	8	1027	48.7	<u>1027</u>	<u>48.7</u>	1027	48.7
473.astar	8	1018	55.2	<u>1019</u>	<u>55.1</u>	1020	55.1	8	<u>954</u>	<u>58.9</u>	952	59.0	956	58.8
483.xalancbmk	8	585	94.3	<u>585</u>	<u>94.3</u>	587	94.1	8	585	94.3	<u>585</u>	<u>94.3</u>	587	94.1

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.20090714.44.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.20090714.44.xml>



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